

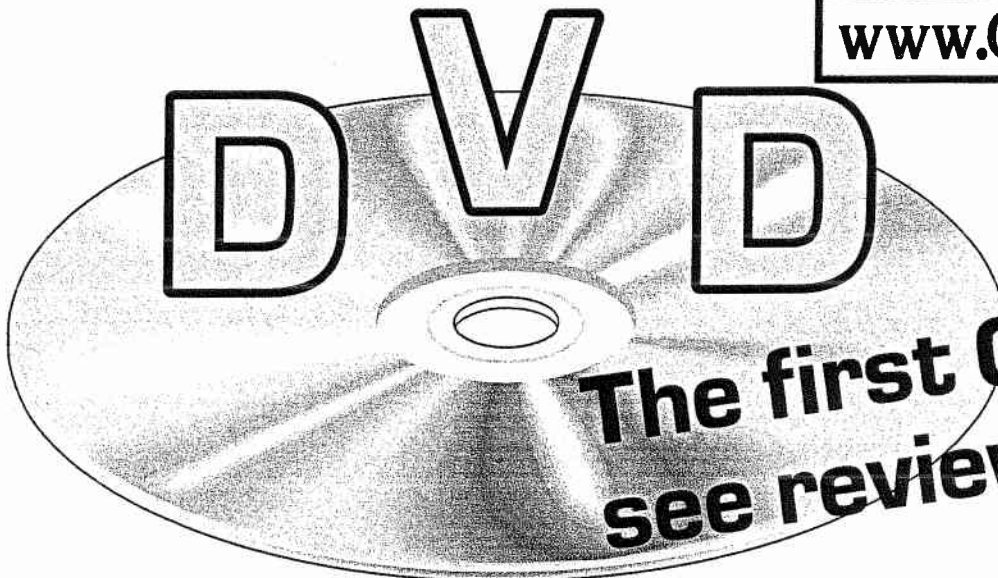
QL Today

Volume 8
Issue 4
Nov./December
2003

ISSN 1432-5454

The Magazine about QL, QDOS,
Sinclair Computers, SMSQ...

www.QLToday.com



**The first QL DVD -
see review inside!**

Shows, Shows, Shows

October and November brought us many QL shows throughout Europe - read more about them and future shows in this issue!



**And another Cover
Disk with the XMAS
issue - Dilwyn Jones'
Launchpad
Trial Version - more
inside this issue!**

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We welcome your comments, suggestions and articles. YOU make **QL Today** possible. We are constantly changing and adjusting to meet your needs and requirements. Articles for publication should be on a 3.5" disk (DD or HD) or sent via Email or into one of the JMS-BBS's. We prefer ASCII, Quill or text187 format. Pictures may be in _SCR format, we can also handle GIF or TIF or JPG. To enhance your article you may wish to include Saved Screen dumps. PLEASE send a hardcopy of all screens to be included. Don't forget to specify where in the text you would like the screen placed.

Article and Advertising deadlines are as follows:

Issue 1: 30 April
Issue 2: 30 June
Issue 3: 30 August
Issue 4: 30 October
Issue 5: 30 December
Issue 6: 28 February

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First there was the QL. Then there was an Aurora, a QXL, several emulators, Q40, Q60..and now the DVD.

Given the enthusiasm with which the QL DVD was being promoted at the Byfleet Quanta workshop, I claimed my review copy and on getting home sat down to view it. See what I thought of it in my review inside!

After some two years of programming I finally released my Launchpad front end for the QL at Byfleet too. Whatever others think of it, I'm quite happily using it for my day-to-day QLing and I hope plenty of people will use it. I think our publisher must have got fed up of me mentioning it in QL Today, because he suggested I should put my software where my mouth is and produce a trial version to give away on the cover disk with this issue. It's a version with all facilities working (including fully working accessory programs) but limited in the number of program icons you can use with it. Follow the instructions in the magazine to install and configure the package (DON'T try to run it straight from the floppy disk, it won't work) and play away to your heart's content! Even if you don't like Launchpad itself, you still get the fully working Accessory programs which are useful in their own right!

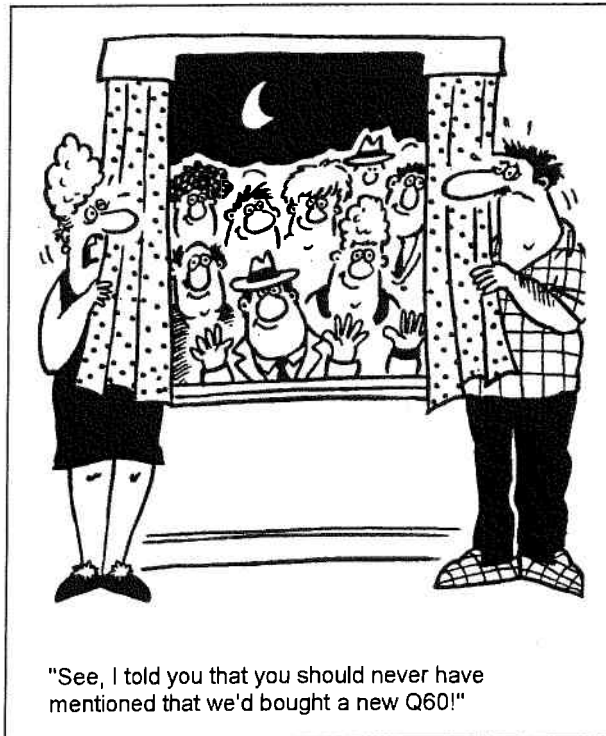
Hopefully, we can do a similar cover disk with the Jim Hunkins QDT software when that becomes available - we have certainly offered him the opportunity to do so.

I attended the Byfleet Quanta Workshop on November 9th and it was great to meet so many QLers again. It's been over a year since I last managed to get to a QL show and apart from the tiredness after 5 hours of overnight driving to get there I really enjoyed myself -

there's still a great spirit at these shows! I've also heard from people who went to the Italian and German QL shows in the last few weeks and enjoyed these too - the QL show scene is proving to be quite busy this year and next year.

You will remember how often we have mentioned the SOQL TCP/IP system. Well, Peter Graf (of Q60 fame) has been sending occasional updates about his QLwIP system too, see the news pages. The last we heard from Jon Dent about SOQL was that he was busy coding the CHAP utility, which he hoped would crack the ISP access problems that some people had been experiencing. He also said he has the sources of an FTP client which he would like to try to port to the SOQL library but hadn't had time to look at it yet.

Thank you for reading QL Today, we hope you will continue to read the magazine and would like to wish you a very happy festive season and new year. Long live the QL!



Cartoon

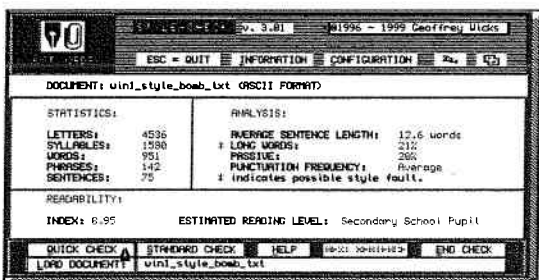
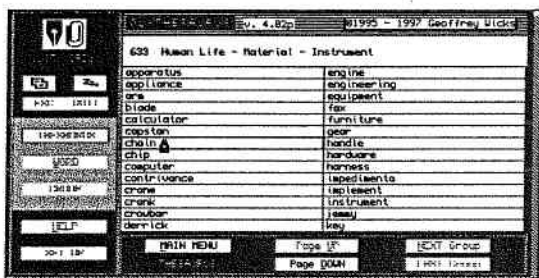
NEWS

Just Words news

QL-THESAURUS and STYLE-CHECK are now freeware programs and can be downloaded from the Just Words! webpage:

<http://members.lycos.co.uk/geoffwicks/justwords.htm>

QL-THESAURUS is version 4.02, which most existing users will now have. STYLE-CHECK is version 3.01 which is a new version displaying the correct house colours in high colour mode.



QL-THESAURUS is approximately 280K of download, while STYLE-CHECK is about 150K.

A message on the website states that "We have recently extended our range of QTYP dictionaries, and hope to place them on this webpage for downloading in the near future."

Compact Flash Adaptor

Darren Branagh writes:

A new type of QL compatible Compact Flash adaptor may be available soon for the QL - Jens Wildgruber in Germany has sourced a new IDE adaptor that he has tested and works with his system.

He has sent it to me to test - so more when I receive it.

Jens wrote that it is type CFDISC.1C, and that it worked on his Aurora/Super Gold Card/Qubide system. The other type tried (CFDISC.5D) didn't work on the same system.

News from George Gwilt

GWASS v4.21

1. GWASS Assembler is now up to version 4.21. The latest change corrected the evaluation of expressions. For example $6+(6-5)*2$ was previously taken as $(6+6-5)*2$.

TurboPTR and CPTR

2. The program SETZ, which helps in the design of windows for a PE application, is being updated so that:

- It will produce both a _WDA file for TurboPTR and a _z file for C68.
- It incorporates the new version of WMAN which is part of SMSQ/E v3.xx.
- Any of the 38 new system sprites can be accessed.

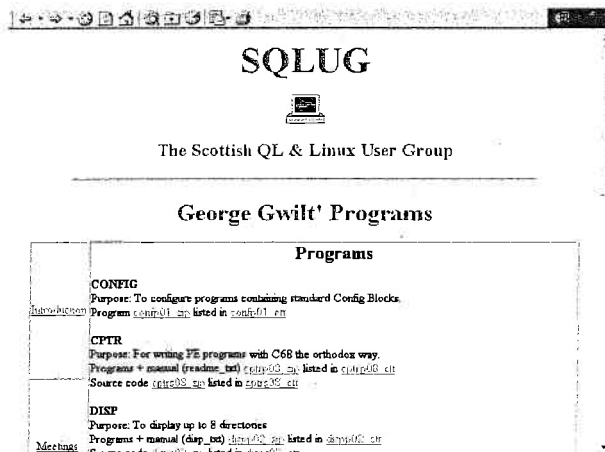
C68

3. The additional vectors in the new WMAN can be reached by a set of C procedures and a header file both of which I have sent to Dave Walker (who maintains C68).

NET_PEEK v3.34

4. A version of NET_PEEK which works with QPC has been produced. The two changes needed were:

- A test for QPC marking the processor as 'not 68020+'.
- The embedded memory device now uses only 68000 instructions. Previously it used some 68020+ ones.



Launchpad

Launchpad was officially launched at the Byfleet Quanta Workshop in November and at the time of writing version 0.94 had just been released. After some 2 years of development with generous assistance and feedback from a number of early testers, an initial flurry of releases quickly stabilised. The program is supplied on two floppy disks (one containing the programs and accessory files,

the second disk containing the manuals) and a couple of sheets of printed Quickstart information to help you install and start using the program at a basic level. Although supplied on disk, it's actually preconfigured for use with hard disk systems, recognising that people will use a front end of this style on hard disk systems. Try to run it from the floppy disk and you'll quickly learn you have to read the instructions before you use it!

To upgrade these early versions, just send both disks back to me, or send me an email if you'd like the updated files sent by email as a zipped file. Future upgrades will be by post only, since the email update involves sending about 700K as 2 zipped files.



Launchpad is available either direct from me for customers wishing to pay in British Pounds Sterling currency, or from Q-Celt Computing in Ireland for customers wishing to pay in Euros currency. Users in Germany and surrounding areas can also order via Jochen Merz if preferred.

Byfleet Show Photos

If you could not make it to the Byfleet Quanta Workshop and would like to see some pictures from the event, visit Tony Firshman's website. He uploaded the page from the show via Jochen's bluetooth mobile phone link system, making him the fastest QL show reporter ever, I think. His site also has pictures from Italian and German meetings.

Byfleet photos:

<http://www.firshman.co.uk/byfleet-2003/>

German meeting:

<http://www.firshman.co.uk/berchtesgaden-2003/>

Italian meeting

<http://www.firshman.co.uk/italy-2003/>

I have also put pictures I took at the Byfleet event onto my website – some of the pictures can be seen in the show report elsewhere in this issue.

<http://homepages.tesco.net/dilwyn.jones/quanta/byfleet/byfleet.html>

QLwIP system

Peter Graf gave this information to the QL-Users mailing list about his QLwIP system.

QLwIP, what works:

- * HTTP server, including support for PUT (upload) method
- * Graphical Mail client: POP3, SMTP with authentication, local folders, serverside message handling, multiple accounts
- * Simple TCP telnet/echo test server
- * Hardware driver for Q40/Q60 ethernet
- * Hardware driver for serial (SLIP)
- * Ping echo
- * Supported protocols: ICMP, IP, UDP, TCP
- * C API similar to Berkeley socket API, *only* internal use
- * Multitasking use of the stack by several jobs

QLwIP, current restrictions:

- * Applications and library must be linked to the same binary
- * Final API not specified nor implemented
- * Jobs using QLwIP can only be safely removed if the network is brought down
- * Name resolver available, but not intergrated
- * TCP over ethernet is artificially limited to about 75 kBytes/sec throughput

QLwIP Release:

The software can already do useful things like transferring files by TCP protocol, which is a good thing especially when communicating with a Windows or Linux box, or act as a Webserver, or deal with personal email if one has a DSL or ISDN router. E.g. this mail was sent by QLwIP from a Q60 under QDOS Classic (Have a look at the "X-Mailer" header

Still I don't find QLwIP fit for a release. Why?

- * QLwIP and especially the API have not the final structure. A premature release could mislead other developers who want to write TCP/IP apps.
- * The OS in it's current stage doesn't allow full-speed multitasking TC P if the ethernet driver is interrupt triggered. An OS change is required, before I can give QLwIP the preferred structure.
- * I would like to see QLwIP integrated into an operating system and use a free software license for my work. Now SMSQ/E is incompatible to all free software licenses, Minerva is free software but not ported to Q60, and QDOS Classic has only a small user base. This is kind of a dilemma.

QL Printers Page

I've put the skeleton of a QL Printers page on <http://homepages.tesco.net/dilwyn.jones/printers/printers.html>

with a list of printers known to work with the QL. The list is short so far, so please send me any additions or corrections via the link on the page. Obviously, with the current trend towards printers without control code sets as such, it is most useful for modern printers, since older ones will tend to be either Epson, Canon or HP compatible (or their own native control code sets). But that said, even older printers would be useful for the benefit of those who buy older printers second hand or whatever, to have some idea if they can be used with QDOSMSQ software. Many modern printers have no "DOS emulation" or whatever you wish to call printers which will work with non-Windows non-Mac systems.

Jimmy Montesinos EMail Address

Jimmy Montesinos, author of the QL2K emulator, writes:

In the process of changing my internet provider, I'm changing my email address:

My new email is now: Jimmy@Jadiam.net

QL PD Library

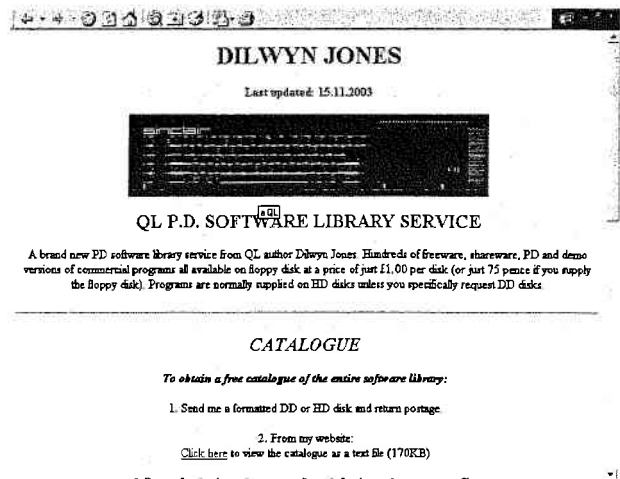
My QL PD Library now consists of 162 disks of general QL PD software, plus the various other categories such as games, clipart, demo versions, Prowess disks and so on.

I have recently added the latest versions of the Turbo compiler, toolkit and associated applications from George Gwilt, as well as George's other programs. Turbo compiler v4.20 and Turbo Toolkit v3.34 may be found on disk GE01 in the library, for example.

Following Geoff Wicks's announcement that he is now releasing QL Thesaurus and Style Checker as freeware, I have added those applications to the library on disks GE161 and GE162 respectively. As these two programs were formerly on Demo Versions disks DE06 and DE07, I have now replaced these with demo versions of QL-2-PC Transfer and QL-Rhymes respectively. Disk DE27 now includes a trial version of Launchpad, similar to the one on the QL Today cover disk, allowing the demo version to be updated as required in the future.

The complete catalogue is available as a plain text file from me on disk, or by email on request, or for download from my website at:

<http://homepages.tesco.net/dilwyn.jones/djpdsoft/index.html>



UQLX News

Phoebus Dokos writes:

A quick note to tell you that I now have working (alpha) versions of the following on BeOS PE 5.03 Max Edition Rel. 3.0 (A free download):

uQLx (still some issues with TCP/IP) and QLAY (some unexpected crashes most likely caused by a problem with word boundaries)

Both require X11R4.6 for BeOS but they work like a charm (well except for the crashes).

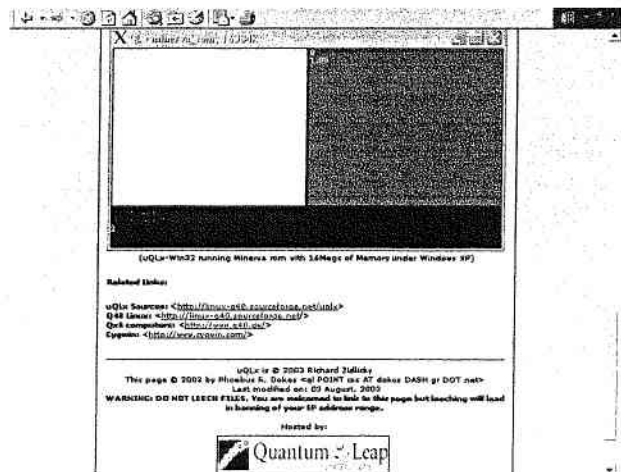
If anyone would like a compiled binary let me know so I can send you one in advance before creating some space next to uQLx-win32 and uQLx-mac web pages.

Visit the uQLx-win32 homepage at:

<http://www.dokos-gr.net/ql/uqlx.html>

Visit the uQLx-mac home page at:

<http://www.dokos-gr.net/ql/uqlxmac.html>



ZeXcel Spectrum Emulator News

Davide Santachiara

A new version of ZeXcel, freeware Spectrum 48k/128k emulator for QDOS/SMSQ systems running under the extended environment, is available for download from my web page:

www.geocities.com/dsantachiara

just scroll down a few lines till you get to the

"latest news" section. Then click on the "download" link where the news about the new ZeXcel version is shown. Or direct link to:

<http://www.geocities.com/dsantachiara/zxemulators.htm>

This version is now compatible with QPC2/QXL



65k colours mode (mode 32) and Q40/Q60 65k colours mode (mode 33). Currently ZeXcel does not support Aurora 256

colours mode and we do not foresee supporting that mode.

QCOCO

Wolfgang Uhlig is writing a nice colour configuration utility to get the new colours "under control".

Please see the article written by Wolfgang in this issue for a detailed explanation. The current version of QCOCO can be downloaded at:

www.uhlich.nl/QL/

QPC News

The current version of QPC2 can be downloaded from: www.kilgus.net/QPC

The current version of QPC2 itself is v3.11 (has not changed recently), but the version of the corresponding SMSQ/E is v3.04. If you run v3.03, an update is probably not necessary, but if you run earlier versions, we suggest an update. Here is a list of the recent QPC-related changes:

Version 3.04

Fixed pointer save on new move operation.

Version 3.03

WM_BLOCK procedure fixed.

Some bugfixes for SER PAR PRT ports.

PRT_USE\$ used wrong offset - fixed.

Cursor move if one-line wdw fixed (delete still a problem) and added configurable key to enter line into stuffer buffer.

PARNAM\$ and PARSTR\$ fixed.

EXTRAS lists all keywords, not only those it thinks are not in ROM.

Extended colour border call with 0 border bug fixed.

Left & right shift keys are handled separately.

Mode screen aspect ratio is variable.



JUST WORDS!

The final countdown...

QTYP dictionaries:

Danish - 23,515 words
Dutch - 180,130 words
French - 208,913 words
German - 165,935 words
Italian - 83,829 words
Norwegian - 61,413 words
Spanish - 174,846 words
Swiss German - 165,810 words
UK English - 82,098 words
USA English - 77,722 words

£1 or €1.5 EACH

Programs:

QL-2-PC TRANSFER
QL-RHYMES
AUTO-GRAPH

£10 or €15 EACH

Plus:

VOCABULARY DATABASE

£5 OR €7.50

Geoff Wicks, 56 Peveril Crescent, West Hallam, Derbyshire DE7 6ND, U.K.

Tel: +44 (0)115 - 930 3713

email: gwicks@beeb.net

Web: <http://members.lycos.co.uk/geoffwicks/justwords.htm>

Launchpad Cover Disk

Having often mentioned Launchpad in the pages of this magazine, we decided it was actually time you got to play with it. Jochen Merz suggested, not to put too fine a point on it, I should put my software where my mouth is and give away a trial version.

Launchpad is a graphical front end for your QDOS or SMSQ/E system.

Set up icons on the desktop to start your programs with a single mouse click, or create your own menus along the lines of those in the Qascade utility for the QL.

In addition to this, add system control menus, some accessory programs (fully working in this trial version!), screen savers and all sorts of things to further the QL experience in the 21st century!

The trial version of Launchpad is fully working in all but one respect. You can only set up 4 programs as icons on the desktop and a small number of entries in the program launcher menus (called Quicklaunch menus). Everything else works – more than enough to help you decide if a pointer driven front end for your QL is to your liking!

Launchpad needs:

- * Expanded memory (512K minimum)
- * Toolkit 2
- * Pointer Environment

The package is supplied on floppy disk, but do not try to run it from the supplied floppy disk, because it won't work! Read the README.TXT file on the disk first to find out how to install and configure the package. It's supplied preconfigured to run from WIN1_LAUNCHPAD_ as it assumes that most people wishing to use a large program of this nature will be using it from hard disk or other high capacity media such as Romdisq.

The accessory programs supplied include:

- * calculator – simple pointer driven calculator
- * calendar – simple monthly calendar with daily

notes (diary) facility

- * character map – pick accented characters from a menu and transfer them to your program via the Stuffer Buffer
- * digital invaders – a simple but addictive game
- * hexpaw – another simple board game
- * Pic file viewer – view PIC file graphics or screens, including high colour screens
- * screen grabber – snatch copies of the QL screen picture, I use it myself to capture screen images for QL Today!

I use it myself to capture screen images for QL Today!

* Q-Trans file handler for copying, deleting, renaming, formatting etc

* LPSaver – mouse-aware screen saver system with several built in modules and facility to use your own screen saver modules

* Text File Viewer – pointer driven text file viewer

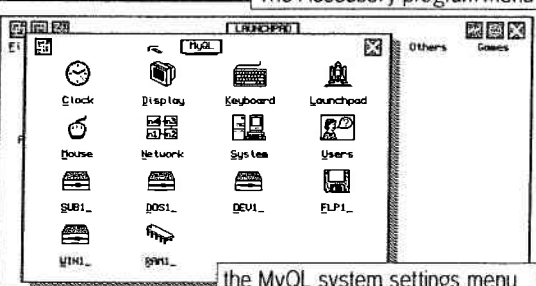
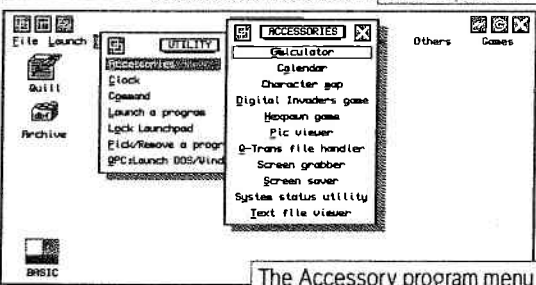
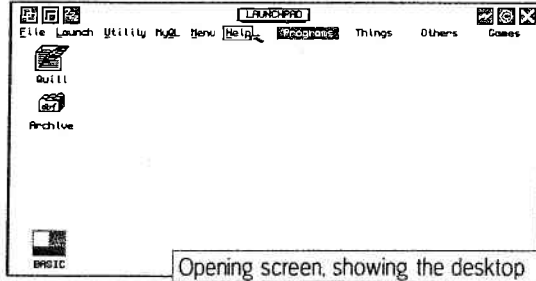
* System Status – on-screen list of your machine settings

These are fully working pointer driven programs with the look and feel of Launchpad, but they can also be used independently of Launchpad – the full versions are supplied.

The full version of Launchpad costs just 20 pounds and may be ordered direct from me (see my advert) or from Q-Celt Computing in Ireland (for customers wishing to pay in Euros currency, send equivalent of 20 pounds to Q-Celt

Computing). Readers in German speaking areas can also order from Jochen Merz Software if preferred.

Remember – read the README.TXT file to see how to install and configure Launchpad before trying to use it. It can be made to work from floppy disk, but it won't run from floppy disk as supplied! The full set of manuals is on the disk, in plain text format (files which have names ending with .TXT). Load them into your favourite text editor or viewer to read them. From within Launchpad, they may be accessed using the Help menu.



TF Services

Compswitch

A UK 4-way trailing socket designed to switch off computer peripherals automatically when the computer is switched off, or (in the case of an ATX computer) when it auto-powers down. *Compswitch* has one control socket, and three switched sockets. Can be used with lights/hifi/monitors—ie a QL monitor can be used as a switch control.

Cost **£24**

superHermes

A major hardware upgrade for the QL. All Hermes features (working ser1/2 at 19200, independent baud rates/de-bounced keyboard/keyclick) IBM AT kbd I/F // HIGH SPEED RS232 at 57600// serial mouse port and 2 other RS232 inputs// 3 I/O lines // EEPROM

Cost (including manual/software) **£90** (£92/£93)
IBM AT UK layout Keyboard..... **£11** (£13/£15)
Serial mouse..... **£8** (£8.50/£9)
Capslock/scrollock LED **£1** (£1.50/£1.50)
Keyboard or mouse lead **£3** (£3.50/£3.50)
High speed serial (ser3) lead..... **£4** (£4.50/£4.50)

Hermes available for **£25** (£26/£27) Working ser1/2 and independent input, debounced keyboard.

SuperHermes LITE: All Hermes features (see above) + an IBM AT keyboard interface only.

Cost (incl keyboard lead) **£53** (£54/£55)

QL REPAIRS (UK only)

Fixed price for unmodified QLs, excl microdrives. QLs tested with Thorn-EMI rig and ROM software.

£27 incl 6 month guarantee

Minerva

The ORIGINAL system operating system upgrade

OTHER FEATURES COMMON TO ALL VERSIONS
DEBUGGED operating system/ autoboot on reset of power failure/ Multiple Basic/ faster scheduler- graphics (within 10% of lightning) - string handling/ WHEN ERROR/ 2nd screen/ TRACE/ non-English keyboard drivers/ "warm" fast reset. V1.97 with split OUTPUT baud rates (+ Hermes) & built in Multibasic.

First upgrade free. Otherwise send **£3** (+£5 for manual if reqd).
Send disk plus SAE or two IRCs

MK1...**£40** (£41/£43) MK1L...**£65** (£66/£67)

MINERVA RTC (MKII) + battery for 256 bytes ram.
CRASHPROOF clock & I²C bus for interfacing. Can autoboot from battery backed ram. Quick start-up.

QL RomDisq

Up to 8 mbyte of flash memory for the QL. A small plug in circuit for the QL's ROM port (or Aurora) giving 2, 4 or 8 mbytes of permanent storage - it can be thought of as a portable hard disk on a card, and reads at some 2 mbytes per second.

Think of it - you could fully boot an expanded QL, including all drivers/SMSQ etc off RomDisq at hard disk speed with only a memory expansion needed.

2 mbytes RomDisq.....**£39** (£40/£41)
4mbytes RomDisq.....**£65** (£66/£67)
8 mbytes RomDisq.....**£98** (£99/£100)
Aurora adaptor.....**£3** (£3.50/£4)

MPLANE

A low profile powered backplane with ROM port

A three expansion backplane with ROM port included for RomDisq etc. Aurora can be fitted in notebook case and powered off single 5V rail - contact QBranch for details. Two boards (eg Aurora and Gold Card/Super Gold Card/Goldfire fixed to base. Suitable for Aurora (ROM accessible from outside) & QL motherboard in tower case. Specify ROM facing IN towards boards, or OUT towards back of case.

Cost **£34** (£35/£36)

I2C INTERFACES

Connects to Minerva MKII and any Philips I²C bus

Power Driver Interface 16 I/O lines with 12 of these used to control 8 current carrying outputs (source and sink capable)

2 amp (for 8 relays, small motors)..... **£40** (£43/£44)
4 amp total (for motors etc)..... **£45** (£48/£50)

Relays (8 3a 12v 2-way mains relays (needs 2a power driver)..... **£25** (£28/£29)

Parallel Interface Gives 16 input/output lines. Can be used wherever logic signals are required..... **£25** (£27/£28)

Analogue Interface Gives eight 8 bit analogue to digital inputs (ADC) and two 8 bit digital to analogue outputs (DAC). Used for temp measurements, sound sampling (to 5 KHz), x/y plotting..... **£30** (£31/£32)

Temp probe (-40°C to +125°C)..... **£10** (£10.50/£11)

Connector for four temp probes..... **£10** (£10.50/£11)

Data sheets..... **£2** (£2.50/£3)

Control software & manual (for all I/F)..... **£2** (£2.50/£3)

QL SPARES

Keyboard membrane **no longer on sale**

1377 PAL **£3** (£3.50/£4)

Circuit diagrams **£3** (£3.50/£4)

68008 cpu or 8049 IPC..... **£8** (£8.50/£9)

8301/8302 or JM ROM or serial lead..... **£10** (£10.50/£11)

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Jochen's Useful Utilities

Jochen Merz

Most of our trusty readers know that I create QL Today with a program called Calamus for the ATARI. Well, it's not an ATARI anymore on which I run it, it has changed to an emulator on PCs like QPC for the QL.

One of the features I found extremely useful was the possibility to change the printer output while the program was running. This was not possible in the early versions of QPC2, so I kept asking Marcel to implement it. And so he did after a while. And now I am writing this article - reason 1 being to show that I really use features I ask for - reason 2 may be that our readers may find it extremely useful too, to be able to change the printer settings not only when QPC starts up but also when it is running.

In Calamus, you can change the printer settings in the Window's Window menu, which means you can't control it by the running program itself, and there is also no way to read the current settings. Marcel's solution is much better: he added functions and procedures to read the current settings, read the printers available in the current system and set the PAR ports to any available printer - which means you have every possibility to set printers manually or automatically depending on the environment. Well done!

I guess most users have not used any of the new PAR facilities, maybe some of them don't even know about them.

First of all, you need a fairly recent version of QPC2 - Version 3. If you want to find out if the new PAR commands are available, type

```
PRINT PAR_GETPRINTER$(1)
```

and you should see the setting of PAR1 which you configured in QPC (usually LPT1 or a real printer name). If the result is 0, then the function does not exist - a good reason to update or upgrade your QPC!

The short program also requires the Menu Extension - of course, how else would one be able to quickly create selection menus?

The screenshots are deliberately made in QL 4 colours so that it does not look too alien for you. It works in the new colour mode too, of course, and looks much better too.

First type in this very short listing:

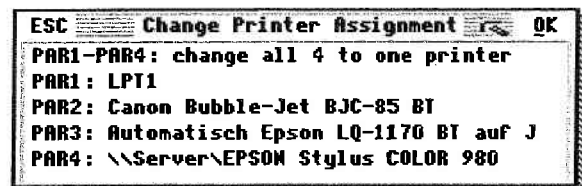
```
100 JOB_NAME "Printer Select"
105 CLOSE#2,#1,#0:OPEN#0,con
110 WINDOW#0,460,200,30,30
130 BORDER#0,1,4:PAPER#0,7:CLS#0
135 OUTLN
140 :
150 REPEAT loop
160 DIM l$(4,40)
170 FOR x=1 TO 4
180 l$(x)="PAR"&x&": "&PAR_GETPRINTER$(x)
200 END FOR x
210 l$(0)="PAR1-PAR4: change all 4 to one
    printer"
220 :
230 choice=LIST_SELECT("Change Printer
    Assignment",l$)
240 IF choice=-1:QUIT
250 :
260 DIM p$(PAR_PRINTERCOUNT,80)
270 FOR p=1 TO PAR_PRINTERCOUNT
280 p$(p)=PAR_PRINTERNAME$(p)
300 END FOR p
305 :
310 printer=LIST_SELECT("Select printer",p$(1
    TO ))
320 IF printer=-1:NEXT loop
330 f=1:t=4:IF choice,0:f=choice:t=f
340 FOR s=f TO t
350 PAR_SETPRINTER s,p$(printer+1)
360 END FOR s
370 END REPEAT
```

Next, save the program, say

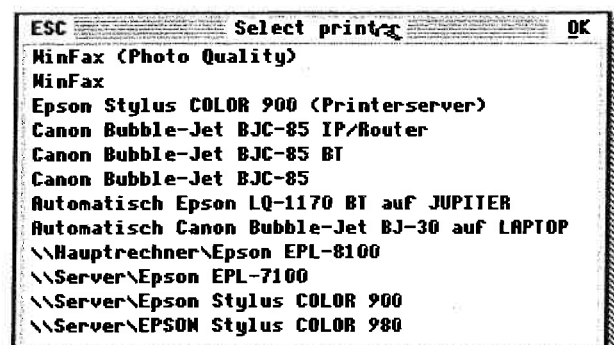
```
SAVE win1_PARSESELECT_bas
```

and immediately try it:

```
EX win1_PARSESELECT
```



You can choose to set all four PARs to the same printer in one go (first menu item) or set the individual PARs (the current settings are shown). Just click on the desired menu item to get



... the list of available printers. Select the desired printer, to get back to the first menu. The changes are immediately visible. You can now set a different PAR port or press ESC to quit. Easy and useful, isn't it?

Debugging With QMON

George Gwilt

In Vol 8 issue 2b of QL Today QMON was mentioned by both Norman Dunbar and Wolfgang Lenerz. Actually Norman called it QMON2 and Wolfgang called it QMON/JMON. The manual for what I use calls it QMON II. The version I have is 2.10 and has been altered slightly by me by the excision of a couple of instructions setting the VBR to zero.

From what Norman says in his article it would seem that my QMON is the same as his QMON2. I will assume that Wolfgang's QMON/JMON is also the same.

I want now to describe how I use QMON to deal with debugging in six different cases. The cases are:

1. Code CALLED by a S*BASIC program.
2. Keywords used by S*BASIC.
3. Programs compiled by Turbo.
4. Program compiled by C68.
5. Stand alone executable programs.
6. 68020+ instructions (including floating point)

Actually the first step in finding errors is to ponder on what happened when the machine crashed, or when the answers were not what you wanted. In every case it is very likely to be true that you know more than you think you do. Sometimes you are able to reason that the results you got could only have happened if . . . And you realise that that in turn could only have been the case if . . . And then the penny drops. Aha, you say, I was using register D0 for two different things at the same time! And so you put right that error without further investigation.

What I am going to describe now is the final tedious stage of stepping through a program instruction by instruction until the error appears. This is what QMON does for you. Norman has described very clearly the mechanism for using QMON. I want to show how I get it started in the first place in each of the first five cases. The last case is somewhat special and I go into more detail there.

First of all I can always be sure that QMON is loaded because the relevant LRESPR is in my BOOT program. When I actually want to use QMON, I do this by setting a daughter SBASIC and opening a con channel 6 (just in case I want to use 3 to 5 later). Actually I load my BOOT into SBASIC and type SCO which is a procedure which opens the con channel for me.

Now for the cases.

1. Code CALLED by a S*BASIC Program

A good way of making a S*BASIC program go faster is to code time critical sections in assembler and CALL the resulting code. This code has to be loaded at an address found by using, say, ALCHP to reserve the space needed. Thus:

```
asad = ALCHP(FLEN(\ram1_code_bin)):LBYTES
ram1_code_bin,asad
```

will set up the code ready to be CALLED.

We need, of course, the address of the code in hexadecimal. To make life easy, I have a function, HX, always loaded. In fact it is part of TurboPTR, so if you load tptr_ext you can have that too. I type "HX asad" and the hexadecimal representation of asad appears in channel #1.

Typing QMON#6 makes the QMON prompt appear. I have now to set the breakpoint

```
Qmon> b 1b9ef4
BRP 001B9EF4
Qmon> g
```

sets it and returns control to SBASIC.

All I need do now is to type CALL asad and the QMON prompt appears with the registers shown as Norman describes.

There is one thing you have to bear in mind though. If the CALLED code goes wrong you should have some way of extracting yourself. The safest way is to go back to master basic and RJOB the SBASIC running the CALLED code. In this way you don't run the risk of coming out of the code with the wrong value of A7.

2. Keywords Used by S*BASIC

The method of using QMON here is very like the method above for CALLED code. The difference is that the address for CALLED code is one you yourself have found. In the case of keywords this has to be discovered. Of the several ways of finding the address I prefer the use of WHERE. Type WHERE followed by a set of contiguous letters to be found in the keyword and the type and address of all the keywords with these letters will appear. For example if I type

```
where 'fp'
```

I get displayed

```
FPNO$          (FN)      0107A66
FPOS           (FN)      3FE3D94
```

The first is a floating point function, which will appear later in Case 6. The second is a familiar function from TK2.

"WHERE" formed part of the disassembler "IDIS" from DPL no longer use IDIS, since it doesn't work properly, or at all, on SMSQ/E, but WHERE is invaluable. I also find it useful if I can't remember all the letters in a keyword. All I need do is type a few of the letters and ask WHERE to supply the rest. Armed with the address you can apply the method of Case 1 above to step through the code for the selected keyword. QMON will spring to life as soon as the keyword is typed or a basic program containing it run.

3. Programs Compiled by Turbo

If possible, I don't use QMON with a Turbo program. The obvious approach with a S*BASIC program is to debug it by RUNNING it, perhaps with extra lines put in with PAUSEs. In some cases this is not possible. Some programs will only operate if compiled. Parser_task is an example of this. Even so, I prefer not to use QMON here. The addition of lines to Parser_task and its re-compilation can show printed information at different stages during the running of the program.

When the use of QMON seems necessary, I have used two methods to arrive at the point where trouble is occurring.

The first is to insert the spurious use of a keyword not used elsewhere in the program. Thus TurboPTR has functions returning colour values. It may be that magenta is never used in the program. If I add

```
20010 spurious%=MAGENTA%
```

to the program and compile it I have the means to start stepping through at line 20010. What I do here is first identify the address of MAGENTA% and then start the program, called, say, ram1_test_task. by:

```
qmon#6,ram1_test_task
```

At the QMON prompt I now set the breakpoint and then type g. QMON will appear with the registers and address of MAGENTA%. Stepping through is now possible.

A second method is also available. A Turbo program is made up of a series of calls to a set of "templates". Each template is like a subroutine. It consists of a set of instructions doing a particular task such as printing. At the end of the instructions the code will look for the next template to be used. If we could find a way of identifying a particular template we could break into the program at that point. Well, there is a way of doing this. The templates are all in the library forming part of codegen_task. The current source code is

called "liboff9g2_asm" and can be found on the SQLUG site.

If DIMN is used in the program and you want to investigate an error at that point and the instructions for "dimn_p" are used to implement this, a breakpoint can be set as follows. First the six instructions at "dimn_p" are extracted. These contain "thread", "base" and "maths". By examining the library file you can see that these are names equating to the registers A5, A6 and A1. If you have followed me so far you can then see that substituting the registers for the names will give a section of code that can be assembled.

In fact the code is

Source		Binary
move.w	(a5)+,d7	3E1D
movea.l	0(a6,d7.w),a0	2076 7000
move.w	(a1),d0	3011
bne.s	param_not0	6602
moveq	#-1,d0	70FF
param_not0		
moveq	#1,d3	7601

Once the program has been started with the call to QMON, we can search for this section of code by typing:

```
Qmon> f 3e1d207670003011660270ff7601 s
```

If no match is found QMON will just give the prompt sign. Otherwise the address where the code appears is shown. Typing "f" again produces the next occurrence of the stretch of code. And so on.

In such cases it is often wise to check that the code is indeed what is wanted and is not similar code from elsewhere. You could use QMON's DI command for this as Norman has described.

Once the breakpoint has been set typing "g" will, as usual, cause the program to run until the breakpoint is reached.

4. Programs Compiled by C68

I used to step through C68 programs by starting at the beginning, stepping past loops with the GB instruction and past subroutines with the GR instruction. After a little practice I knew where the real program would begin. But, boy, was it tedious! I then realised that it would be far better to use the method described in the previous case. As it happens, I always use GWASS for the C68 compilation. One reason is that examining the code generated for GWASS gives me a better insight into what C is really about than hours of poring over a manual. So, all one needs to do is to stop the C68 compilation at the point where GWASS code is generated. It is usually a simple matter to

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Notes on Software requirements

The following programs have a minimum SGC card requirement: P-Word, Qword, Big Britain MAP for Q-Route

find a stretch of code near where a breakpoint is needed. As in the case above, the code is assembled and QMON asked to search for it in the compiled program.

5. Assembly Executable Programs

There are two sub-cases here. The first is where you have written the program yourself, or have access to the source code and can assemble it to produce the program. You can then use the `_SYM_LST` method described so clearly by Norman. This will work both for GWASL and for GWASS.

The second sub-case is where all you have is the program itself. This is much more difficult. If it as a large program it is too time-consuming to step all the way through it to the point where trouble is occurring. The fact is that I did find a fault with PERFECTION which prevented it working with a version of SMSQ/E. I identified the place in the program and wrote a patch correcting it. To find such places with QMON requires ingenuity. I think what I did was to bring PERFECTION to the point when a particular keypress was going to cause the error. I then used NET_PEEK to look at the registers of PERFECTION. This told me the PC, or Program Counter, at this time. By calculation it was possible to determine the relative address of the PC. I now had information I could use to stop the program at that point if it were started by QMON. Of course it is possible I did something completely different!

NET_PEEK is a program, available from the SQLUG site, which can examine and display RAM. For example it will list the contents of registers for a given job. It will also give a list of all channels open and can display details of any one of these. It can operate on any QL machine. On a 68020+ it can also disassemble any part of RAM, recognising all 68020+ and floating point instructions.

6. 68020+ and Floating Point

I hope that Wolfgang Lernerz will have a glance at these paragraphs! I say that because, unless he has a vastly different QMON to mine and Norman Dunbar's, his reports concerning its operation with 68020+ instructions are not wholly accurate.

It is several years now since I advanced from GWASL to a version of GWASS that would assemble 68020+ instructions. I thought that, since GWASS would assemble these I might as well assume that its host machine would obey them. So GWASS is filled with the many mouth-watering 68020+ instructions.

I would not and indeed could not have written GWASS without proper disassembly and debugging facilities. If they had not been available I would have written them. After all I wrote GWASS because there was no alternative. True, there was an assembly program supplied with the Thor 21, but it had bugs and no one to correct them.

I must admit that, especially with floating point, I use a combination of NET_PEEK and QMON to debug 68020+ programs, or indeed any programs.

To illustrate how this works and also how QMON fares with these esoteric instructions I have the following code which can be CALLED without hurting anyone.

Source		Binary
<code>fmove.w</code>	<code>#34,fp3</code>	F23C 5180 0022
<code>fmove.x</code>	<code>fp3,fp2</code>	F200 0D00
<code>moveq</code>	<code>#1,d0</code>	7001
<code>lea</code>	<code>zom,a0</code>	41FA 000A
<code>move.l</code>	<code>(a0,d0.w*4),d0</code>	2030 0400
<code>moveq</code>	<code>#0,d0</code>	7000
<code>rts</code>		4E75
<code>zom</code>	<code>dc.l \$0,2222aaaa</code>	0000 0000 2222 AAAA

The first two instructions put the number 34 into the two floating point registers FP2 and FP3.

The third non-standard instruction contains `*4` after `"d0.w"`. This has the effect of multiplying the contents of D0.W by 4 before adding the result to A0. This is a good way of indexing into a set of long words without having to do the multiplication explicitly.

To step through this the assembled code is loaded into a reserved space, just as described in Case 1. A breakpoint is set at that address and we return from QMON to S*BASIC. Now let's see what happens when we step through the program.

```
At brp SR 0008 —O—N— SSP 0028480
D0-D7 FFFFFFFF1 00000000 00000000 00000000 etc.
A0-A7 0002BC6C 00290004 00020002 02000100 etc.
001B9EF4 F23C XX
Qmon>
SR 0008 —O—N— SSP 0028480
D0-D7 FFFFFFFF1 00000000 00000000 00000000 etc.
A0-A7 0002BC6C 00290004 00020002 02000100 etc.
001B9EFA F200 XX
Qmon>
SR 0008 —O—N— SSP 0028480
D0-D7 FFFFFFFF1 00000000 00000000 00000000 etc.
A0-A7 0002BC6C 00290004 00020002 02000100 etc.
001B9EFE 7001 MOVEQ #1,D0
Qmon>
SR 0000 —O— SSP 00028480
D0-D7 00000001 00000000 00000000 00000000 etc.
A0-A7 0002BC6C 00290004 00020002 02000100 etc.
001B9F00 41FA LEA $1B9FOC(PC),A0
Qmon>
SR 0000 —O— SSP 00028480
D0-D7 00000001 00000000 00000000 00000000 etc.
```



```

A0-A7 001B9F0C 00290004 00020002 02000100 etc.
001B9F04 2030 MOVE.L $(A0,DO.W),DO
Qmon>
SR 0000 —0— SSP 00028480
DO-D7 2222AAAA 00000000 00000000 00000000 etc.
A0-A7 001B9F0C 00290004 00020002 02000100 etc.
00B9F08 7000 MOVEQ #$(0,DO
Qmon>
SR 0004 —0—Z— SSP 00028480
DO-D7 00000000 00000000 00000000 00000000 etc.
A0-A7 001B9F0C 00290004 00020002 02000100 etc.
001B9FOA 4E75 RTS
Qmon> g

```

At this point we return to S*BASIC unscathed.

You will of course notice that register is indeed filled with the long word 4 bytes from the start of the address in A0. The program, as reported by QMON, worked as planned.

First of all it is worth considering why QMON did not in fact collapse under the weight of unexpected instructions. The answer lies in the way QMON works. QMON manages to gain control of the program by manipulating the VBR. This is the Vector Control Register which contains the addresses of code which is used for each 'exception' that occurs. For example when an illegal instruction is found, not by QMON, but by the processor, control is passed to the relevant address in the VBR. When a breakpoint is requested, QMON sets the word at that address to \$4AFB which is an illegal instruction. The processor then jumps to the exception address for illegal instructions and, lo and behold, this is the address set by QMON to step through the program! What it does now is to replace the correct first word of the instruction which was the cause of the breakpoint. The processor is now allowed to obey this instruction. Only if that instruction is now an illegal one, or otherwise causes an exception, will QMON signal something wrong.

In other words, QMON arranges for the instructions to be obeyed one by one and only if the processor finds something wrong does QMON signal an error by:

```
Il.ins SR etc.
```

It is now time to see what NET_PEEK can do with this snippet of program.

We call NET_PEEK, press 9 (for disassembly) and put in the address of the program. We then see:

```

001B9EF4 F23C 5180 0022 FMOVE.W #0022,FP3
001B9EFA F200 0D00 FMOVE.X FP3,FP2
001B9EFE 7001 MOVEQ #01,DO
001B9F00 41FA 000A LEA 00
001B9F04 2030 0400 MOVE.L 00(A0,DO.W*4),DO
001B9F08 7000 MOVEQ #0,DO
001B9FOA 4E75 RTS

```

```

001B9F0C 0000 0000 ORI.B #00,DO
001B9F10 2222 MOVE.L -(A2),D1
001B9F12 AAAA ??

```

This of course is the correct disassembly of the program until we get to the constants at \$1B9F0C. So we can use NET_PEEK to look at both 68020+ and floating point instructions. However, there is more that NET_PEEK can do.

Let's see what it has made of the registers during the stepping through. I am assuming now that FPSAVE, supplied with Q40/60, has been LRESPrd. This causes the FPU state to be saved for any program using it in much the same way as the state of the integer unit is stored by the operating system's scheduler.

If we press 2 for Registers and set the number of the SBASIC program say, 6, we will see the registers stored for that job. Since the Floating Point Unit (FPU) has been used we will see, after the second instruction has been obeyed:

```

REGISTERS FOR JOB No 6 NAME SBASIC
FPCR $0000 FPSR $00000000 FPIAR $1B9EFA Saved $1B8780
FP0 = 7FFF0000 FFFFFFFF FFFFFFFF FP1 = 7FFF0000 FFFFFFFF FFFFFFFF
FP2 = 40040000 88000000 00000000 FP3 = 40040000 88000000 00000000
FP4 = 7FFF0000 FFFFFFFF FFFFFFFF FP5 = 7FFF0000 FFFFFFFF FFFFFFFF
FP6 = 7FFF0000 FFFFFFFF FFFFFFFF FP7 = 7FFF0000 FFFFFFFF FFFFFFFF
DO = etc.

```

I have not shown the contents of the integer unit's registers, D0 to A7, since the contents shown belong to QMON and, apart from A6 and A7, are not the same as those shown by QMON for the program under investigation.

NET_PEEK shows that 34 has indeed been put in the two FPU registers. If you want to double check this, you can use the function FPNOS\$, supplied with Q40/60. The address after 'Saved' is where the contents of the FPU registers can be found. FP0 is 14 bytes from that address. The remaining registers are stored each 12 bytes further on. By printing FPNOS\$(\$1B8780 + 24,5) you would see 3.3999E-1.

By the way, the contents of all the other floating point registers are NANs. That is, they are 'not a number's. When the FPU is reset all registers are filled with NANs.

It is difficult to see what more need usefully be done to allow the easy stepping through of assembled programs which contain 68020+ instructions.

I may say that I have never felt that QMON is insufficient apart from its inability to disassemble 68020+ instructions. I agree with Norman Dunbar that it is a good tool to help find the mistakes that inevitably occur in programs.

Clocking In - Follow Up

David Denham

Following my articles in Volume 6 and Volume 7 of QL Today, I'd like to offer for publication an enhanced calendar program.

The original listings in part 3 of the series gave a program to display the day of the week on which a particular date fell, or a calendar program which displayed the full year.

A friend asked me if I would modify one of the listings to allow him to step forward or backward month by month as required, rather than have to print off the whole year.

This listing is my solution to the request. It simply displays the month requested, then waits in a loop for you to press one of these keys:

B to go Back a month
N to go forward to the Next month
ESC to stop the program.

The listing should work for all years during which the current calendar system is valid. The month number is entered as a number from 1 to 12 (internally converted to the month numbering system needed by Zeller's Congruence formula), the

year number is entered as a 4-digit number.

The names of the months are held in a DATA statement at line 690 - alter this line to use month names in other languages. The month names are centered above the calendar by line 410, and the day names are displayed by line 430. Alter the PRINT statement in line 430 to change the day names. The program displays SUNDAY as the first day of the week. Some diaries and calendars display saturday or monday as the first day of the week, the program does not offer this sophistication I'm afraid.

The DATA statements in line 710

contain the number of days in each month of the year, from January to December. Do not alter the number of days in the second entry (February) - the program automatically alters the '28' to '29' for leap years. Remember that in addition to the rule of thumb that leap years are year numbers divisible by 4, the turn of a century also needs to be considered - turn of century should be a number divisible by 400 to be a leap year, thus 2000 and 2400 are leap years, but 1800 and 1900 are not.

The symbols top left and right [B] and [N] are just to help you remember the controls - B for Back a month, N for Next month.

Figure 1 shows the output from this program:

```
=====
[B]      August 2003      [N]
=====
SUN MON TUE WED THU FRI SAT
1   2
3   4   5   6   7   8   9
10  11  12  13  14  15  16
17  18  19  20  21  22  23
24  25  26  27  28  29  30
31
=====
```

Figure 1: Sample output of calendar

```
=====
100 REMark day of the week, using Zeller's Congruence
110 :
120 CLS : CLS #0
130 day1 = 1 : REMark always start from 1st of month
140 INPUT'Month (1-12) > ';month
150 INPUT'Year (1582-4902) > ';year
160 REMark Month names and days in month data
170 DIM month_name$(11,28),days_in_month(11)
180 RESTORE
190 FOR a = 0 TO 11 : READ month_name$(a)
200 FOR a = 0 TO 11 : READ days_in_month(a)
210 :
220 REPEAT program
230 CLS
240 REMark month number should be Jan=11,Feb=12,Mar=1,Dec=10
250 REMark adjust the month number accordingly
260 IF month<3 THEN adj_month=10+month:ELSE adj_month=month-2
270 :
280 REMark decide if a leap year
290 IF ((year MOD 4)=0 AND NOT((year MOD 100)=0)) OR (year MOD 400) = 0 THEN leap_year = 1 :
ELSE leap_year = 0
300 adj_year = year
=====
```

```

310 REMark Jan and Feb are months 11 and 12 of previous year
320 IF adj_month > 10 THEN adj_year=adj_year-1
330 century = adj_year DIV 100 : REMark the century number 15 to 49
340 year_in_cent = adj_year MOD 100 : REMark year within century 00 to 99
350 :
360 REMark this is Zeller's Congruence
370 day_no=(INT(2.6*adj_month-.2)+day1+year_in_cent+(year_in_cent DIV 4)+(century DIV 4)
-2*century+700)MOD 7
380 :
390 REMark centre month name
400 PRINT '[B]' TO (27-LEN(month_name$(month-1))-5) DIV 2;month_name$(month-1);' ';year TO 24
; '[N]'
410 PRINT
420 PRINT 'SUN MON TUE WED THU FRI SAT'
430 PRINT
440 FOR d = 1 TO days_in_month(month-1)+(leap_year = 1 AND month = 2)
450   IF day_no > 0 THEN PRINT TO 4*day_no;
460   IF d < 10 THEN PRINT ' ';
470   PRINT d;
480   IF day_no = 6 THEN PRINT : day_no = 0 : ELSE day_no = day_no + 1
490 END FOR d
500 :
510 REMark where to go next?
520 REPEAT wait
530   key = CODE(INKEY$(-1))
540   SELECT ON key
550     =27 : EXIT program
560     =CODE('b'),CODE('B') : month = month - 1
570     IF month < 1 THEN year = year - 1 : month = 12
580     EXIT wait
590     =CODE('n'),CODE('N') : month = month + 1
600     IF month > 12 THEN month = 1 : year = year + 1
610     EXIT wait
620   END SELECT
630 END REPEAT wait
640 END REPEAT program
650 :
660 STOP
670 :
680 REMark data for names of months and days per month
690 DATA

```

A Crucial Device

Norman Dunbar

As many (!) of you will be aware, I have been writing the Assembly Language series of articles at home on my wife's business PC and at work on my work PC. The system I use is Marcel's excellent QPC2 and I have a pseudo hard drive at work, at home and on a Zip disc which I use to transfer between locations.

Recently I have got myself confused somewhat as I managed to overwrite a set of article files with older ones when I copied from the hard drive to the Zip disc instead of the other way around. This led to

the loss of some updates and bug fixes to QLTDIs - the series project. (Who said 'don't you have a backup?' - I'm a computer professional, what do we need backups for?)

I decided that I would no longer use the files on either of the hard drives and restrict myself to using the Zip drive only and simply set up a QPC icon on the root folder of the Zip drive which I can use at home or at work and then I can save my changes directly to the Zip drive. While this is not as fast as having a 'proper' hard drive, it works - well, it did!

At work, my PC was upgraded to a new one and because of a particularly busy time, I was not able to get the Zip drive transferred over from my old PC for a couple of months. At home, right at the same time, a new hard drive needed to be installed and in order to get the data copied over and sanitised, I had to leave the Zip drive out - suddenly I have no way to access the latest data on the Zip disc I use all the time. Not only that, but the files on the assorted PCs were now out of date. Because of this I missed one article all together, and the most recent one was based on the out of date files on my home PC, but demonstrated the use of QMON2 for debugging purposes.

When I recently had a quiet moment at work, I dismantled the PC and found to my horror that there wasn't a suitable slot to install the internal SCSI adaptor for the Zip drive – so I can no longer use it at work. At home, I managed – after a while – to get the data transfer sorted out and everything has now been copied to the new (larger) hard disc and the Zip drive is back in and working again – under Windows anyway – I have a slight problem to sort out under Linux at the moment though.

Not to worry as I can now attempt to sort out where I was in the series and continue as if nothing had happened. I still have the problem of getting at my files when I am at work. In a message on the QL newsgroup/ mailing list, Roy Wood (at least I think it was he) mentioned cheap 'solid state discs' that plug directly into the USB port on the PC. One of those would be quite useful as they are reliable, have no moving parts and can be obtained just about anywhere.

As ever, I did nothing about the matter until I recently went on holiday to Crete (very nice, and very hot – there was a heat-wave when we were there!) and passing through Dixons at Manchester Airport (my least favourite place in all the world) I spotted a few of these disc thingies ranging in size from 32 Mb through 64 Mb up to a massive 128 Mb. Unfortunately, even at (so called) Duty Free prices, they were not cheap. If I remember correctly, the 128 Mb device was around 120 pounds sterling – so I decided to give it a miss and had visions of spending my days transporting my series between home and work on a humble 3.5" floppy disc again.

After the holidays, I was check-

ing out the crucial.com UK website (www.crucial.com/uk – if I remember correctly) and spotted under USB devices, a thing called 'The Crucial Gizmo' which is exactly the sort of device I was looking for. These are complete with a lifetime warranty and a free (!) USB extension cable which makes it easier for you to plug it in and remove it when the USB ports are 'round the back' of the PC or inaccessible. Not only that, but it saves wear and tear on the motherboard USB sockets as well.

The Crucial Gizmo ranges in size up to 256 Mb (twice the size of Dixon's biggest offering), is much better looking in a nice shade of silver/grey, comes with a protective cap for the USB plug and costs only 60 Pounds Sterling – half the price and double the size of the biggest one from Dixons. I ordered one straight away – it was 16:00 hours on a Friday afternoon – I should have it for Monday I figured. Even better, postage is free.

Next morning at 07:45 Alison (my wife) and I were woken by a knock on the door at home. It was the Postman delivering my Gizmo – how's that for delivery!

The device is quite simple to use – you plug it in to the USB port while the system is running (or while it is switched off) and Windows (2000 in my case) will recognise it as a removable drive and assign it a suitably random drive letter. Under Linux (Mandrake 9.1) it is also recognised as a removable drive and mounted as `"/mnt/removable"` – although if you don't like the name, you can create a symbolic link to `"/mnt/removable"` and call it `"/mnt/gizmo"` if you like.

If you use Windows 95 then you have to download a free

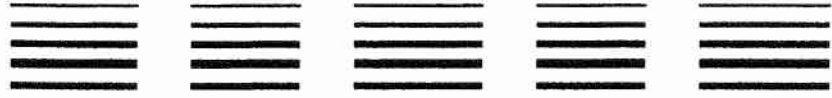
driver from Crucial to make it work. When you get it working, you will notice that the driver files are actually already loaded onto the Gizmo but, as you don't have the drivers to make it work under Windows 95, you can't get them off – seems like a strange thing to do if you ask me!

By the way, never plug the device in (or unplug it) while the PC is booting up – it confuses the hell out of the system and hangs the Windows load process resulting in a PC doing a pretty good impression of an old ZX-81 when the dreaded RAM pack wobble set in. (Or my original QL when the fridge fired up!)

Ok, having 256 Mb of blank device called for a serious setting up of QPC2, a new hard drive file and sorting out my source code so that the latest version is on the Gizmo. This was simply done and I have QPC2 up and running 3 times on the Gizmo. I have a copy of my home PC setup, my work PC setup and the setup that used to be on my Zip disc. All I have to do now is get the files compared and note the differences between what I actually have and what I really should have (according to the articles) and finally, make the definitive version. (I'm still working on this – as shall be revealed soon.)

Ok, a small problem re-appears. As with the Zip drive, I end up with a different drive letter when I'm at home and at work. How to solve this problem. I asked on the QL newsgroup/ mailing list and Marcel replied with the blindingly obvious answer – simply set up the Win1_ through Win8_ locations as relative paths instead of absolute paths. So if my QPC.EXE file is located in `c:\QPC` and there is a QXL.WIN file in `c:\QXL` then instead of saying that

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WIN1_ is c:\QXL\QXLWIN I simply say that it is .\QXL\QXLWIN which means that when I execute QPC.EXE it will be able to locate the qxl.win file it needs for Win1_.

Setting things up on the Gizmo is even easier, I simply copied my qxl.win file to the Gizmo under the QPC folder and renamed it to win1.win. I then copied my second qxl.win drive over and renamed it to win2.win. I then configured QPC to look for files win1.win and win2.win in it's own folder and to use these as win1_ and win2_ - simplicity itself.

So, now, at long last I have a system which is easily portable between work and home, I have my latest copy of QPC installed and a pair of hard drives configured which are local to the folder on the Gizmo where QPC is installed. When I go to work, I simply plug the Gizmo in and when it appears as a drive in Explorer, I double click on the QPC.EXE icon (shortcut) (also on the Gizmo) and it fires up with the correct files being used for Win1_ and Win2_. When I go home and I'm

allowed (!) to play on the PC (Hello Alison!) I do the same and using exactly the same icon, I can be up and running with the same system as I had at work - no juggling of drive letters or reconfiguring my QPC options at startup required. Plain and simple is how I like things.

Having got everything sorted out for use at home and at work, I was promptly made redundant. How's that for ironic?

Anyway, as there is currently a need for me to be looking for work rather than spending my lunch hours doing QLTDIs, I'm afraid that future articles may not be coming as regularly as the past ones have been. While I make every attempt to get stuff written, debugged (eventually) and typed up for you, I'm currently a bit un-motivated as you may well imagine. Hopefully you will forgive me if I miss out an issue here and there.

OK, on closing, here's a useful tip for business people and even private individuals out there. While browsing through Dixons at the airport, I noticed a sign which said that business

users can claim back VAT on all their purchases. As this was in the Duty Free shop I enquired and was told by the manager that there is no longer any such thing as Duty Free, what you get at the airport is simply a discount equivalent to some (or all) of the duty. For this reason, you are still paying VAT and can claim it back. So much for the business users - what about the private individuals who cannot claim their VAT back?

Well, if you go into your local Dixons (or possibly Currys, PC World etc) and ask them to match a cheaper price you can get an item for elsewhere, they usually will be happy to meet the cheaper price. Tell them that in a Dixons at Manchester Airport, the item costs much less and claim your discount. If they say that it is Duty Free, explain that there is no Duty Free only a discounted price equivalent to the duty - and that you want a similar discount. Ask them to phone though to Dixons at the airport if they try to fob you off.

Have fun.

QL Shows

Tony Firshman

Berchtesgaden - October 2003

(See <http://www.firshman.co.uk> for a full selection of photos)

No bicycles this time.

Roy Wood, Alf Kendall and I were invited on Peter Fox's Piper Cherokee.

This was the third time I had flown with him, but the experience was no less exciting. We all had noise cancelling headsets, and can hear (but usually not understand) the conversations with ATC - Air Traffic Control. OK now being a seasoned

traveller, it makes more sense, but not much.

It was surprising to find out that Peter had enough fuel for the whole trip. His wings must be practically all fuel tank. As usual he had his GPS on the end of loose wires, plugged into a cigarette lighter slot. The trip was pretty uneventful until we approached Salzburg, when the battery on Peter's GPS was failing. The fuse looked blown, so I said I could solder a

strand or wire onto it at the show. Ironically the GPS unit is the most modern equipment on the plane. It is not essential, but saves him doing any complicated calculations for ATC.

We hired a car and arrived at



our destination in good time. Friedemann Oertel (the organiser) was the only other person to join us for dinner. The goulash soup I remembered from last time – superb and a meal in itself.

There were quite a number of non-traders at the show for a change – well two of them had been on our plane! I had the only 'real' QL there, running Ben's lego as usual, and I repaired Peter's fuse, so I thought (see later). I also had my Canon G5 digital camera, and a Toshiba Libretto to upload to. I discovered that Jochen had a permanent free mobile internet connection all day, via his bluetooth. His connection is free in many European countries (based on an Austrian contract, where it is cheap but not free) - but we were 3 miles away from Austria!

That gave me the idea of creating a photo page for my web site. I had a CF PCMCIA adaptor to give the page and photos to Jochen. However he had started linking to everyone in the room with his bluetooth network. Amazingly he had a PCMCIA bluetooth card, so we proceeded to set up the card on my Libretto, born considerably before bluetooth had even been heard of. I must say the installation, although automatic, is one of the most complex I have ever seen. You wouldn't believe the number of devices it finds, and hence, com ports. I think it got up to com16.

Still my ancient machine coped perfectly, and very soon I had an internet connection. I ran puTTY (teletype terminal program) and logged into my

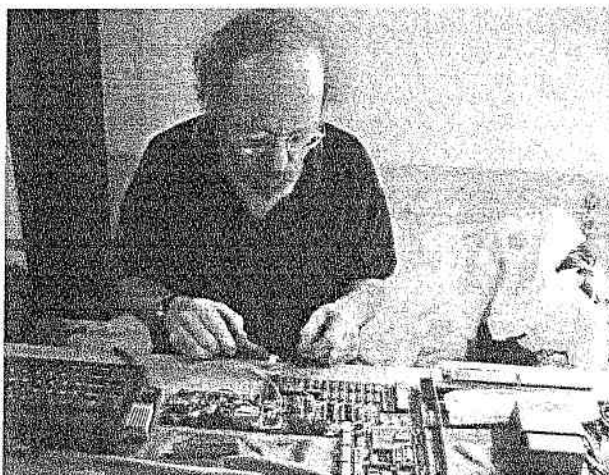
Linux web server in Tring, and started uploading files. The first few went fine, but then in typical windows fashion, they then stopped dead, not a word of apology from Windows. Nothing would restore, so I resorted to giving them to another bluetooth man (Marcel Kilgus)



who completed the download. Jochen then emailed the ql-users mailing list with the upload news before the end of the show.

That is practically all I did at the show!

We then had a communal dinner with practically everyone who was at the show – in true show tradition. And I had yet another Goulash soup and Schnitzel.



On the return flight we tried the 'repaired' GPS – but the battery was still not charging. We un-earthed Alf's multimeter, to find

there was no power on the cigarette lighter socket. "Where is the fuse for that, Peter" "Dunno". I realized that the overhead light must have a power input. I unscrewed the fitting, and managed to link to the 12v line. Amazingly the spring clip wire for the earth in the GPS plug fitted neatly over the lamp holder. I insulated the 12v line with masking tape from the spine of my G&S Mikado libretto (not Tosh this time). (I am having to shave my 30yr old beard for the performance – visitors to Byfleet beware), and it worked. Peter said he would say there was an "engineer on the flight" in the log. I only realised the significance of what he said when I mentioned this to a friend who is learning to fly.

Pilots are not allowed to do any of their own repairs, or even change a fuse. About all they are allowed to do is top up the engine oil. Oh yes – that reminds me. We had what looked like a major oil leak, but Peter seemed totally unconcerned. Maybe that was good acting!

We arrived back at Biggin Hill after the long trip and all desperately rushed through the nominal customs to the loo. We

then had to return to the plane to taxi to our parking spot and thence to the outside car park. Customs here is totally nominal. What DOES one do if caught short on a long flight? Peter's plane could have gone almost eight hours.

On the return trip we also had to avoid gliders, parachutists and cumulus, and descend to 4500 ft to avoid icing – not the sort of things you think about on a

737 (I am writing this Italy bound in an Easyjet with a view of the snow covered Alps) We couldn't get near them in Peter's plane - we couldn't fly high enough!

I now have to switch off for landing at Milano!

Reggio Emilia, Italy October 2003

Booking myself and Roy for the trip was interesting. Our outgoing flight was easy and very cheap. ...but October 25th was the last day of the Summer season. Booking did not open for another 2 months for the winter season. This though had an unexpected benefit. Jochen arranged to be picked up at Zurich airport, and they offered to pick us up on the way to

Reggio. They then suggested we fly back from Zurich. This would also involve high jinks at Alpamare which has the longest flumes in the world. Not my idea of heaven, but there we are.

We arrived at Hotel Paradiso in Cavriago to find Davide waiting, along with Al and Dorothy Boehm, the Dents and Nasta. We set off for dinner to the other side of Montecchio, only to find the village closed. Is Montecchio always closed? A few years back when Stuart Honeyball and I cycled to Parma, we looked for lunch in Montecchio, but it was closed then as well.

We had a very convivial supper in a room all to ourselves, on a very long table. Al Boehm was sitting next to me, and it emerged he had arrived by US military air cargo for the show.

He assured me it was not in a packing case. However facilities were very sparse and they had to carry their own oxygen. It was free though. The only snag was that they had to leave the following morning before the show started. He did manage to introduce his new "Rock and Rap" church mass, and exorcise a few evil demons. I said I would show it to the Director of Music at St Peter's Church, Berkhamsted.



However I did tell him I thought it would go down too well there - we are more used to Byrd and Victoria. I think Stanford (Victorian era) is about the most adventurous we get.

We arrived at the show the fol-



lowing morning despite my directions. It was all very familiar territory, but this time there were plenty of people there. I managed again to get Ben's

lego working, with mainly borrowed equipment. I then proceeded to assemble a web page of photos, and we then tried to upload them. Nothing could persuade any of our computers to link to Jochen's wifi internet connection. My Toshiba Libretto had no trouble finding his machine, but that was all. OK we will use Marcel's laptop, as we did in Berchtesgaden. No joy. I eventually persuaded Jochen to allow me to use his machine direct, and we uploaded most of the pictures successfully. I then used puTTY (again) to log in to my web server, and configured.

I spent quite a bit of time trying to 'repair' a RomDisq. It emerged after much trial that it was being used on an unexpanded QL - it needs more memory than that!

Nasta wanted an Mplane - so I offered him the one I had. "I only need a pcb" - which I had!

The show though was very much like old times, as I sold a lot of goods after I packed up at the end of the day.

This was the best show for sales for quite a few years.

Davide deserves thanks for organizing it and getting so many Italian users attending.

There were plenty of demonstrations hosted as always by Davide. We set off the following morning for Zurich and the water park. On the way we went through real picture postcard scenery. I am always amazed

by the scale of the Alps. At one point one got classic views (lakes, mountains, trees, snow) in all 4 directions at once - it was all too much!

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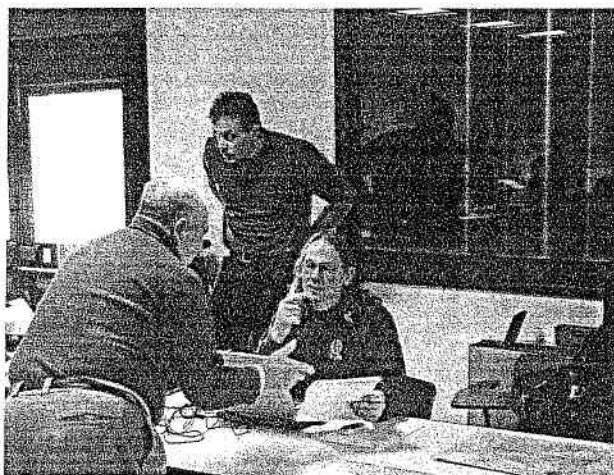
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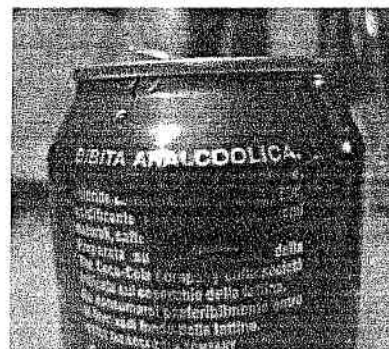


The water extravaganza was as bad for my stomach as I had feared. Jochen though (in particular) looked particularly exci-

ted by it all. I did as many chutes as my body would allow. We went to an open air iodine and salt hot water pool. This was superb, but the signs said 20 minutes only, 90 minutes later I was extracted. It was the perfect relaxing place to finish revising my music for the following week's performance of G&S Mikado.

We then headed for the airport and home.

Final comment: we were surprised to see that Italian Coca Cola can be used not only to cool thirsty throats.



Gee Graphics! (on the QL?) - Part 36

H L Schaaf

```

100 REMark Lame_bas
110 REMark for GG#36
120 REMark H L Schaaf Nov 1, 2003
130 :
140 WTV
150 get_input : set_up_window : set_points
160 INK 7 : show_Lame
170 QL_Circle_Ellipse : Bounding_Rectangle
180 recap : PAUSE : RUN
190 :
200 DEFine FuNction Lame_distance(x,y)
210 RETurn ((ABS(x)/Lame_a)^Lame_e1 + (ABS(y)/Lame_b)^Lame_e2) -
1
220 END DEFine Lame_distance
230 :
240 DEFine PROCedure get_input
250 CSIZE#0,0,0 : INK#0,7
260 prn$ = "Please ENTER a positive real number for " : CLS #0
270 REMark values for width, height, and exponents 1 and 2
280 INPUT#0; prn$ & "half width ? ";Lame_a
290 INPUT#0; prn$ & "half height ? ";Lame_b
300 INPUT#0; prn$ & "width exponent ? ";Lame_e1
310 INPUT#0; prn$ & "height exponent ? ";Lame_e2
320 END DEFine get_input
330 :
340 DEFine PROCedure set_points
350 REMark graphic centers of the 'control' pixels
360 topx = Graphic_X(Block_Column%(0)) : botx = topx
370 lefx = Graphic_X(Block_Column%(-Lame_a))
380 ritx = Graphic_X(Block_Column%(Lame_a))
390 lefy = Graphic_Y(Block_Row%(0)) : rity = lefy
400 topy = Graphic_Y(Block_Row%(Lame_b))
410 boty = Graphic_Y(Block_Row%(-Lame_b))
420 REMark show control points
430 INK 7
440 POINT ritx,rity : POINT topx,topy
450 POINT lefx,lefy : POINT botx,boty
460 REMark start at extreme right
470 p0x = ritx : p0y = rity
480 END DEFine set_points
490 :
500 DEFine PROCedure show_Lame
510 REMark use starting point on the contour

```

Superbasic, Super-ellipse, and more

Martin Gardner wrote about Piet Hein and the Superellipse in Scientific American, Number 213, September 1965, pages 222 to 234. The article was reprinted with annotations and reader responses as Chapter 18 of the book "Mathematical Carnival" in 1975 by Knopf, ISBN 0-394-49406-7.

Gardner contrasted squares with circles, rectangles with ellipses and described how Piet Hein in 1959 had found a curve that provided a pleasing blend between straight lines at right angles and arcs of conical sections which he first used to design and build a traffic intersection in Stockholm.

From Gardner we learn that Gabriel Lame wrote about a whole family of curves in 1818 that are now known as Lame curves. Lame used this formula: $(x/a)^{\text{exp1}} + (y/b)^{\text{exp2}} = 1$ Negative values lead to com-

plex numbers, so we have restricted ourselves to positive (ABSolute) values. The 'a' value will set the width and the 'b' value will set the height. The bounding rectangle will be 2*a (from x = -a to x = +a) wide and 2*b (from y = -b to y = +b) high, with x = 0, y = 0 as center. The exponents (real positive numbers) can be different or the same. If the exponents are both 2, then we have the ordinary ellipse (or circle, if a = b). As the exponents get larger than 2 the curves bulge out toward the bounding rectangle to form "Superellipses". As the exponents get smaller than 2 the curves shrink in toward the x and y axes to form "sub-ellipses". When the exponents are 1, the 'curve' is a diamond of 'straight' lines. By having one exponent less than 2 and the other exponent greater than 2, we can have the curves that both bulge and shrink.

The listing "Lame_bas" is a way to explore Lame curves. You are asked to set the parameters for width, height, and the two exponents. The QL will then reset the screen to fit, work out the 'size' of a pixel and begin a slow path around the curve, using only adjacent pixels. This could be an excellent exercise for a DIY assembly language toolkit addition.

Just for fun we have the QL show the usual circle, ellipse, and bounding rectangle, and then a recap of the variables is shown.

Some values used for width, height, and the two exponents:

Piet Hein, Sergel's Square,
Stockholm; 6, 5, 2.5, 2.5
William Hogan used 2.2 as
exponents for 1930's
Parkway arches.

```

520 px = p0x : py = p0y
530 q = 1 : REMark force into first quadrant
540 REMark start loop here to follow the Lame contour
550 REPEAT follow
560 POINT px,py : make_Moore : MIN_loc = 0 : MIN_spot = 1E6
570 :
580 REMark catch the extreme control points, top, left, bottom
590 :
600 REMark 1st to 2nd quadrant ?
610 IF (q=1) AND (py >= Lame_b OR py == topy ) THEN
620   q = q + 1
630   LINE px,py TO topx,topy TO -px,py : POINT -px, py
640   px = -px
650   NEXT follow
660 END IF
670 IF (q=1) AND (px <= 0 OR px == topx) THEN
680   q = q + 1
690   LINE topx,py TO topx,topy : POINT topx,topy
700 REMark find symmetrical point across y axis,
710   px = topx - H_rpp
720   NEXT follow
730 END IF
740 :
750 REMark 2nd to 3rd quadrant ?
760 IF (q=2) AND ((px) <= -Lame_a OR px == lefx) THEN
770   q = q + 1
780   LINE lefx,py TO lefx, -py : POINT lefx,-py
790   py = -py
800   NEXT follow
810 END IF
820 IF (q=2) AND (py <= 0 OR py == lefy) THEN
830   q = q + 1
840   LINE px,py TO lefx, lefy : POINT lefx,lefy
850   py = lefy
860   NEXT follow
870 END IF
880 :
890 REMark 3rd to 4th quadrant ?
900 IF (q=3) AND (py <= -Lame_b OR py == boty) THEN
910   q = q + 1
920   LINE px,boty TO botx, boty TO -px, boty : POINT -px, boty
930   px = -px
940   NEXT follow
950 END IF
960 IF (q=3) AND (px >= 0 OR px == botx) THEN
970   q = q + 1
980   LINE botx,py TO botx, boty : POINT botx, boty
990   px = botx + H_rpp
1000  NEXT follow
1010 END IF
1020 :
1030 REMark 4th to beginning ?
1040 IF (q=4) AND (py >= 0 OR py == rity) THEN
1050   LINE px,rity TO ritx,rity : POINT ritx, rity
1060   EXIT follow
1070 END IF
1080 IF (q=4) AND (px >= Lame_a OR px == ritx) THEN
1090   LINE ritx,py TO ritx,rity : POINT ritx, rity
1100   EXIT follow
1110 END IF
1120 :
1130 REMark choose search direction based on quadrant
1140 SElect ON q
1150   = 1 : FOR m = 1, 7, 8
1160   = 2 : FOR m = 5, 6, 7
1170   = 3 : FOR m = 3, 4, 5
1180   = 4 : FOR m = 1, 2, 3
1190   = REMAINDER : PRINT #0; 'Quadrant Error in follow' :PAUSE
1200 END SElect
1210 Moore(m,0) = ABS(Lame_distance(Moore(m,1),Moore(m,2)))
1220 IF Moore(m,0) <= MIN_spot THEN
1230   MIN_loc = m : MIN_spot = Moore(m,0)
1240 END IF
1250 END FOR m
1260 px = (Moore(MIN_loc,1)) : py = (Moore(MIN_loc,2))

```

```

1270 POINT px,py
1280 IF (dist_btwn(px,py,p0x,p0y)) < (pix_diag/2) : EXIT follow
1290 END REPEAT follow
1300 END DEFINE show_Lame
1310 :
1320 DEFINE PROCEDURE QL_Circle_Ellipse
1330 INK 2 : CIRCLE 0, 0, Lam_e_b
1340 ELLIPSE 0, 0, Lam_e_b, Lam_e_a/Lam_e_b, 0
1350 END DEFINE QL_Circle_Ellipse
1360 :
1370 DEFINE PROCEDURE Bounding_Rectangle
1380 INK 4 : POINT Lam_e_a,0
1390 LINE TO Lam_e_a,Lam_e_b TO -Lam_e_a,Lam_e_b
1400 LINE TO -Lam_e_a,-Lam_e_b TO Lam_e_a, -Lam_e_b TO Lam_e_a,0
1410 END DEFINE Bounding_Rectangle
1420 :
1430 DEFINE PROCEDURE recap
1440 CSIZE #0, 1,0 :CLS #0
1450 PRINT #0;," a = ";Lam_e_a!!!"b = ";Lam_e_b!!!"e1 = ";
1460 PRINT #0;Lam_e1!!!"e2 = ";Lam_e2 \
1470 PRINT #0;\' (x/\' ;Lam_e_a;\' )^\' ;Lam_e1;\' + (y/\' ;
1480 PRINT #0;Lam_e_b;\' )^\' ;Lam_e2;\' = 1\'
1490 END DEFINE recap
1500 :
1510 DEFINE FUNCTION dist_btwn(xpt,ypt,x,y)
1520 REMARK distance between two points xpt,ypt as point of origin
1530 xdis = (x-xpt) : ydis = (y-ypt) : sqdist = ((xdis*xdis) +
(ydis*ydis))
1540 IF sqdist > 0 THEN
1550 dbtw = SQRT(sqdist)
1560 ELSE
1570 dbtw = 0
1580 END IF
1590 RETURN dbtw
1600 RETURN xdis
1610 RETURN ydis
1620 END DEFINE :REMARK FN dist_btwn(xpt,ypt,x,y)
1630 :
1640 DEFINE PROCEDURE make_Moore
1650 LOCAL i
1660 REMARK set up Moore neighborhood around px,py
1670 REMARK (x,y)=0 ,N=1, NE=2, E=3, SE=4, S=5, SW=6, W=7, NW=8
1680 REMARK
1690 REMARK [nw] [n] [ne] 8 1 2
1700 REMARK [w] [x,y] [e] = 7 0 3
1710 REMARK [sw] [s] [se] 6 5 4
1720 DIM Moore(8,2)
1730 FOR i = 0,1,5 : Moore(i,1) = px : END FOR i
1740 FOR i = 6,7,8 : Moore(i,1) = px - 1*H_rpp : END FOR i
1750 FOR i = 2,3,4 : Moore(i,1) = px + 1*H_rpp : END FOR i
1760 FOR i = 0,3,7 : Moore(i,2) = py : END FOR i
1770 FOR i = 1,2,8 : Moore(i,2) = py + 1*V_rpp : END FOR i
1780 FOR i = 4,5,6 : Moore(i,2) = py - 1*V_rpp : END FOR i
1790 END DEFINE make_Moore
1800 :
1810 DEFINE PROCEDURE set_up_window
1820 PAPER #2,0 :INK #2,4 : CLS #2
1830 PAPER 0 : INK 7 : CSIZE 1,0
1840 Mo_de = 4 : MODE Mo_de
1850 Graspix = 0
1860 IF VER$ = "HBA" : Graspix = (476/645)
1870 IF VER$ = "JSL1" : Graspix = (476/645)
1880 IF VER$ = "JSU" : Graspix = (344/549)
1890 IF NOT(Graspix) THEN
1900 PRINT\,"Need a ratio of graphic x to y
!"
1910 PRINT\," for ROM version ";VER$
1920 STOP
1930 END IF
1940 REMARK set for 448,202,32,12 same as WTV
default
1950 REMARK change to suit other window
definitions
1960 Wp_wi% = 448 : REMARK WTV window pixels wide

```

Gerald Robinson, Toronto
Parking Garage: 9, 7,
e(2.71818..)
Aesthetic ?? 1, phi, e (1,
.61803..., 2.71818..)

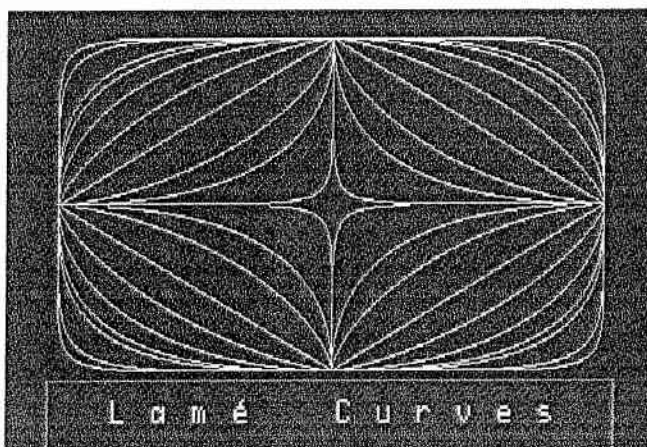
If carried to 3 dimensions the Superellipse becomes a Super-egg. The Superegg has the uncanny knack of balancing on the long end! Hein liked the values 4, 3, 2.5, 2.5 for his Superegg.

Next time we hope to try a parametric polar way to show these curves.

Using Google we found more recent topics that are related: 3D Superquadrics(1981), extended Superquadrics(1999), Superformula(2001), and Super-shapes(2003).

These might also be the basis for future Gee Graphics articles.

Please note that we have deliberately set the listing to the outside of the page - so that it may be easier to keep the magazine open for you in order to type it in - Editor.





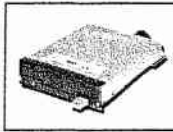
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<i>Shipping Costs:</i>	
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Europe	US\$ 5.00
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<i>(Pennsylvania Residents add 6.0% Tax)</i>	



Since many Qx0 users do not have the broadband connection required to download the latest version of Q40Linux, Quantum Leap offers now pre-burned versions with small printed documentation (Installation instructions). These CDs are offered as a service to the community and the small cost you have to pay is to cover the time needed, cost of media, trays etc.

Q40 Linux	US\$10.00
<i>Does not include Shipping & Handling.</i>	
<i>Shipping Costs:</i>	
USA	US\$ 2.00
Canada	US\$ 4.00
Europe	US\$ 4.50
Rest of the World	US\$ 7.50
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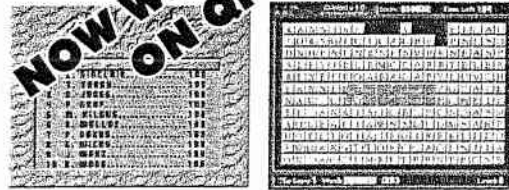
- **QL Emulators CD US Edition v.3.00a!!!** - Contains all software in v.2.x but adds BeOS versions of uQLx (with TCP/IP support) and QLAY (original edition - not QL2K).
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SMSQ/

The new version is finally out! Numerous enhancements like the ability to move window outlines in the PE, extra commands, rock solid floppy disk support, stable support for ProWesS and many more!

Available with or without printed manual for the Q40/Q60, QXL/QXL II, Gold/Super Gold Card, Atari ST). Aurora GD2 available separately.

SMSQ/E (with Standard Printed Manual)	US\$ 49.95
SMSQ/E (with Enhanced Printed Manual)	US\$ 69.95
SMSQ/E (without Manual)	US\$ 29.95
SMSQ/E v3.01 GD2 for the Aurora	US\$ 49.95
<i>Shipping Costs:</i>	
USA	US\$ 3.85
Canada	US\$ 4.50
Europe	US\$ 5.00
Rest of the World	US\$ 8.00
<i>(Add \$1.00 for ED Disk - Pennsylvania Residents add 6.0% Tax)</i>	

UPDATES can be sent for the price of a floppy disk for only the s&h (or for free via email). Updating SMSQ/e for the Aurora from a non colour driver to a colour driver edition costs \$20.00.

Q60

Quantum Leap can now provide expansion hardware for Q40 and Q60 machines.

ISA Slot Expander (when available)	US\$ 15.00
ISA NE2000 Compatible (not always available)	US\$ 20.00
Memory Expansion (32 Meg EDO SIMM)	US\$ 10.00
2 IDE channel Multi I/O	US\$ 59.95



Quantum Leap
Hardware & Software

A FEW UK JM/JS QLS AVAILABLE at various configurations. Contact us for details!

```

1970 Wp_hi% = 202 : REMark WTV window pixels high
1980 Wp_xo% = 32 : REMark WTV window pixel Left edge
1990 Wp_yo% = 12 : REMark WTV window pixel Top edge
2000 Wp_bo% = 4 : REMark 1 is the WTV window pixels border
2010 REMark but we used 4 for border as 'invisible' margin
2020 wpa = (Wp_wi%-(4*Wp_bo%))/(Wp_hi%-(2*Wp_bo%))
2030 wga = wpa*Graspix
2040 IF Lame_a/Lame_b > wga THEN
2050 Sca_le = (2*Lame_b)*(Lame_a/Lame_b)/wga
2060 ELSE
2070 Sca_le = 2*Lame_b
2080 END IF
2090 :
2100 REMark review of some of the variables used
2120 REMark Wp_hi%, Wp_wi%, Wp_xo%, Wp_yo% for WINDOW Pixel units
2140 REMark Wg_hi, Wg_wi, Wg_xo, Wg_yo for WINDOW Graphics units
2150 REMark Top, Bottom, Left, Right for Graphic values of WINDOW edges
2160 REMark V_rpp, H_rpp for Vertical and Horizontal Graphic range/Pixel
2170 REMark Wg_xo and Wg_yo for WINDOW graphic x and y origin offsets
2180 REMark there are other variables in the program !
2190 horiz_scale = (Scale/(Wp_hi%-(2*Wp_bo%)-1))
2200 horiz_scale = horiz_scale * Graspix * (Wp_wi%-(4*Wp_bo%)-1)
2210 REMark set Graphic origins(offsets) to put 0,0 in center
2220 Wg_xo = - horiz_scale/2 : Wg_yo = -Sca_le/2
2230 V_rpp = Sca_le/(Wp_hi% - (2*Wp_bo%) - 1)
2240 H_rpp = V_rpp * Graspix
2250 Top = Sca_le + Wg_yo
2260 Right = (Wp_wi%-(4*Wp_bo%)-1) * H_rpp + Wg_xo
2270 Left = Wg_xo + H_rpp/2 : Bottom = Wg_yo
2280 REMark Left & Bottom as 'central' Graphic values for those Pixels
2290 REMark pix_diag is diagonal graphic distance across Pixel
2300 pix_diag = (SQRT(V_rpp*V_rpp + H_rpp*H_rpp))
2310 WINDOW Wp_wi%, Wp_hi%, Wp_xo%, Wp_yo% :CLS
2320 REMark BORDER Wp_bo%,242 : REMark golden color
2330 REMark when no border used, Wp_bo% = 0
2340 BORDER Wp_bo%
2350 REMark when no border color is used, border is 'invisible'
2360 SCALE Sca_le, Wg_xo, Wg_yo : CLS
2370 END DEFine set_up_window
2380 :
2390 REMark FuNctions to convert Graphic(x & y) to Pixel(row & column)
2400 :
2410 DEFine FuNction Block_Row%(Graphic_Y)
2420 grvs% = INT((Graphic_Y - Bottom)/V_rpp + .5)
2430 BlockRow% = Wp_hi% - grvs% - 1
2440 RETurn BlockRow%
2450 END DEFine Block_Row%
2460 :
2470 DEFine FuNction Block_Column%(Graphic_X)
2480 grhs = (Graphic_X - Left)/H_rpp + Mo_de/8
2490 REMark + 1 for MODE 8, + 1/2 for MODE 4 for HBA and JSLI
2500 REMark always + .5 for JSU
2510 IF VER$ = "JSU" :grhs = (Graphic_X - Left)/H_rpp + .5
2520 blkcol% = INT(grhs)
2530 RETurn blkcol%
2540 END DEFine Block_Column%
2550 :
2560 REMark FuNctions to convert Pixel(row & column) to Graphic(x & y)
2570 :
2580 DEFine FuNction Graphic_X(Block_Column%)
2590 GraphicX = (Block_Column%-.25) * H_rpp + Left
2600 RETurn GraphicX
2610 END DEFine Graphic_X
2620 :
2630 DEFine FuNction Graphic_Y(Block_Row%)
2640 GraphicY = (Wp_hi% - 1 - Block_Row%) * V_rpp + Bottom
2650 RETurn GraphicY
2660 END DEFine Graphic_Y
2670 :
2680 REMark end of listing Lame_bas

```

QCoCo - The QL system colour configuration program

Wolfgang Uhlig

Tony Tebby gave us the window manager and Marcel Kilgus gave us the colours.

During the last 2 years or so there were a lot of articles in QLToday explaining the concept of the GDI colours and how to use it in SBASIC programs. But it was in february of this year (if I remember correctly) that Marcel presented the first "colourways" as he called them with which you could give your desktop another look by changing the system colours.

Most of us 'ordinary' users, I suppose, have no clue how to use the the new system colours in order to make QPAC2, the menus of MENU_rext, QD, QSPREAD and some other programs appear in a completely unknown way on our displays. I heard people say "whatever I change, I always get black or a strange stipple or something ugly, but not the colour I want" (I was one of them :-).

This summer Roy Wood asked me to program a colour configuration program in which one would be able to change all relevant colours and borders of the system by a simple mouse-click. I accepted, not knowing what trouble I got myself into.

It appeared to become a journey through the (for me) unknown land of Bits and Bytes, HEX-colour and border definitions, a dive into the secrets of Tony's menu definitions which are not always really logical, and, in the end, an adventure to bring all this to life within a EasyPtr program which does not 'understand' the new system colours.

I've worked hard and - with a whole bunch of helpful e-mails from Marcel - learnt a lot. By now most of the work is done and everyone who wants to use the program and play around in order to give a splash of colour to his desktop, is invited to get it on my website:

www.uhlich.nl/ql

You'll find two QCoCo-archives, one with the complete bundle of files which are necessary. At the moment of writing this article, the version number is 0.6, but will probably be higher when you read this. Another archive includes only the recently updated files.

Because I developed this program with always the latest versions of QPC, SMSQ/E (Wman!), MenuRext, Qpac2, QD and Qspread, I cannot promise that it will function well when you don't have them. I recommend to get them, too. Of course I cannot deliver them, you will have to contact your dealer.

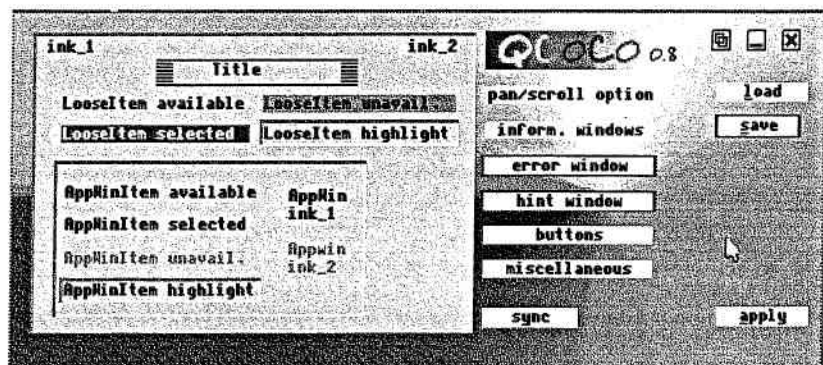
Please read the README file, not only for further information but also for correct program installation.

There are some things you must know when you start changing colours on your system.

- not all changes will have an effect because not all windows/menus/items are used by the system. Up to now we (Marcel and I) have not found an application that uses *subsidiary information windows*, for example.
- The loose items unavailable in the "channels menu" of Qpac2 have a colour they shouldn't, this derives from a decision of Tony and Marcel doesn't know whether this will be fixed.
- Some windows have *foreground and middleground* colours, I call them "ink_1" and "ink_2". It is not always easy to find where a change of ink_2 takes place.
- The 3D-borders: you have lots of them but unfortunately only some of them really look good. So don't be disappointed when you change them and find out that there is hardly any change. For the tiptools of QD and Qspread you even must not take thick borders because the tooltip window gets too small to show the contents. On the other hand the 3D-borders are fantastic when you program in SBASIC, wonderful effects are possible.

I plan to make a good documentation when the program is ready. But that will not happen before next year, I'm afraid.

Until then you have to test and find out for yourself. Have fun!



Byfleet QL Show 2003

Darren Branagh

I was looking forward to this one - hadn't been to the UK for a show in a while as I had become a father in March, and missed the AGM show etc. in April. Having had nothing but nappies and bottles for 8 months, I was looking forward to relaxing and playing with My QL and chatting to old friends at Byfleet, which has a reputation of always being a well attended show.

I arrived into Luton airport Early on Saturday morning, on an 8.30 flight from Dublin thanks to Ryanair. Because of the ungodly hour of the morning, the flights were cheap, so it made it do-able for me to come over via air. This meant however that I was restricted in the amount of stock I could bring for the show, but you can't have everything. Steve Reyal (my partner in crime for the production of The QL DVD) was there to pick me up, and we headed to Tottenham Court Road in London - the mecca for cheap computer bits n' bobs, and had a scour around the computer fairs - 3 in total. Just shows how much gear I have when I really couldn't find anything I didn't have, let alone wanted. I got a hand-free kit for my Nokia 7650 camera phone, and a CD of ringtones and Applications, but not much computer stuff. Still, fun to compare prices with back home. We also stopped off that evening to see The new Matrix movie, which I really enjoyed - no QL's though.

As a result Saturday came and went pretty quickly, and it was Sunday already. We headed off for the 45 minute trip to Byfleet



Byfleet show organiser Ken Bain with Sarah Gilpin, one of the organisers of next year's Quanta AGM in Manchester

from Isleworth at a bit before 9am. It was good to see the gang again - Tony Firshman was at his usual place just inside the door, and Roy Wood of QBranch was facing him, with Dilwyn Jones next to Roy.



John Mason and Sarah Gilpin staffing the Quanta stand at the show

Jochen occupied his usual place along the wall and the back of the hall and Quanta

were in front of the stage, again, as usual. The bring and buy stall was neatly laid out on top of the stage itself.

Dilwyn had travelled down overnight from North Wales by car (his wife Chris doing most of the driving as he had been working until quite late on Saturday night) in order to Launch Launchpad - pardon the pun. It sold very well, with Dilwyn having to make extra copies on the spot after all the copies he had brought had sold out by Lunchtime! If you haven't seen Launchpad yet, you must get a copy, as its so easy to use and works on just about any QL platform. It is a Desktop Graphical User Interface, that allows you to assign icons to your favourite programs, to customise your desktop, and even have password login for yourself and other users, and much more - it even

comes with a suite of extra programs such as a calculator, picviewer, screen snatcher, and file transfer program included on the disk as well. It also has a devilishly simple pointer game called Decimal Invaders - but the less said about that the better, as I lost several hours to playing that game when Dilwyn sent it to me for testing, its so addictive!! Launchpad costs just 20 pounds, and is available from Dilwyn or Q-Celt Computing.

Tony was busy right to the end, repairing several items and seemed to be busy and in deep concentration most of the day. He was still busy with something long after most

of the other traders had packed up. He had a lovely tiny Toshiba Libretto which he had repaired and got working, which was basically a palmtop running full windows - and would fit in the inside pocket of a jacket. He had managed to get a PSU for it and redeem it from an uncertain future, and fitted a wi-fi card for wireless networking. Just shows how things can be useful after many have labelled them obsolete - the QL is a prime example.

Jochen as usual had a crowd around him most of the day, updating software and selling new items too. He had a large selection of CD-R and CD-RW media (as is the norm these days, and at very reasonable prices - this is where I buy much of the stock for Q-Celt CD's) and also cheap inkjet cartridges too. It was also nice to see Bernd Reinhardt and Marcel Kilgus had travelled across with him too. Marcel no doubt working hard on updates to QPC2 - just a matter of time before NASA choose it to run the space shuttle in my opinion. What a truly remarkable piece of software.

Paul Merdian introduced himself to me as the New QUANTA editor replacing Bruce Nicholls - Congratulations, Paul. He approached me to become a seller of his Crossword solving programs, and after twisting my arm to buy a copy from him, I agreed to sell them for him, so if anyone is interested I will be selling his programs from now on. They really are excellent - you can insert any unknown

word of any length into these programs and it will spit back all words fitting those parameters. Eg, entering HO??E will pro-



New Quanta newsletter editor Paul Merdian

duce HORSE as well as HOUSE, and several other permutations - its obvious Paul has put a lot of work into these. Very useful for anagrams, crosswords and word games. Contact Q-Celt for details. He also said he is working on a word list of 1.6 Million words. Amazing.



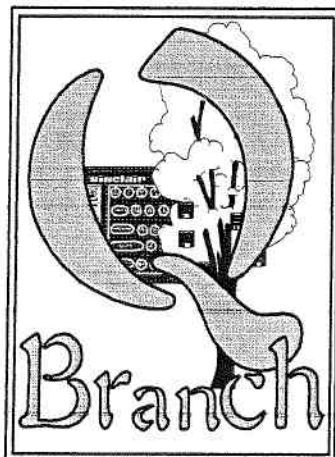
Paul Merdian and Quanta treasurer John Gilpin

Roy Wood of QBranch was also very busy, and had the usual vast collection of pointer programs for sale. He also had a lot of old QL Today maga-

zines, and some Spectrum stuff, all at giveaway prices. He asked me to bring him over a bottle of Jameson Whiskey from Duty-free, which I did, so he went away happy I think.

John and Sarah Gilpin were there representing QUANTA. Sarah was collecting names and deposits for a meal to take place at the Manchester AGM in April 2004, which should be an excellent event, and will be spread over the two days - See QUANTA for the full details. Next year will mark the 20th Anniversary of the QL so it would be nice to have a large attendance at this event, similar to the QL2000 show in Portsmouth. I managed to help John Gilpin with a USB related printing problem from QPC2, and he was also mentioning updates to the QUANTA library disk.

Also, it is always nice to see some other good programmers being kept busy. I have been a fan of Chris Caves programming work since I reviewed his wonderful MView multi-file viewing program in QL Today some time ago. Chris has written a wonderful vector drawing program and gave me a brief demo and a copy at the show. It seems to be very powerful, and extremely accurate, and I hope to do a full review when I've had time to play with it a while - watch this space. Chris said he has wanted to write this program since he got a QL, and it has only taken him 20 years to do so!



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£ 79.00

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Text 87 is the only QDOS / SMSQ wordprocessor capable of handling the full screen on the Aurora / QXL / QPC systems. New drivers are currently being written.

PROGRAMMING

QD 2003	£ 49.00
QD + QBasic	£ 63.00
QD + Qliberator + QBasic	£ 104.00
Qliberator	£ 50.00
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Q Branch would like to wish the readers of this magazine and all our customers a Merry Christmas and a Happy New Year.

As has probably been mentioned elsewhere this coming year is the 21st anniversary of the birth of the QL. Special shows are organised for this and we hope to be able to see you at some of them.

In the meantime there is news of a new batch of Aurora boards being build to go with the newly released High Colour SMSQ/E for the Super Gold Card. We hope to also bring you a new Qubide sometime later in 2004.

This coming year should also see the launch of QDT - the QL desktop
 There is a lot happening in the 21st year of the QL.

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It was nice to see a busy show, as I was kept on my feet for most of the day too. I sold quite a few CD's, which was nice for a change, and helped solve a few queries for some QLers



which is what its all about. I left Dilwyn concentrating on Launchpad, and I worked on selling the QL DVD (I actually sold some!) and also the CD range. I also have had a few ideas for some new CD's to add to the range, but more on that in the future.

We all packed up around 4pm, as scheduled. Some of the traders headed to a bar nearby for a quiet drink and a chat to reflect on the day, but Myself and Steve had already rang home to his Mum and she was cooking us dinner (and what a great cook she is!) so we declined and headed straight home. We arrived home quite quickly and demolished several plates of great grub (thanks Kathleen!)

Sunday night was spent in Steves flat in Isleworth, watching DVD's and also doing some video editing (Steve is an expert video editor and technician, having worked for both Disney and Bloomberg) so he is working on my sons christening video, and making it into a DVD. Monday we did some shopping, and I had a well deserved lie-in (the first in months!) and we headed to the airport for my 7.30pm flight home. However, due to a bad accident on the worlds largest car park (aka the M25)

we were stuck in traffic for ages and decided not to bother trying any further and turned back, which left us paying a premium for a ryanair flight very early on Tuesday Morning, and myself just



managing to make it back into work by my 11am start. Still, not to worry - it was a fun weekend and something I had missed for a while. Can't imagine the world without any QL shows...

Can't wait for the London Show shortly after Xmas - I hope to be there, cheap Ryanair flights permitting.

The QL is dead? Long live SMSQ/E!

Wolfgang Lenerz

Like a character in a Monty Python movie, the QL (and the OS it spawned) is still shouting "I'm not dead". And I can prove that this is true - not only amongst us diehard QLers, but even out there, in the real world, in M\$ Land..

An industrial application running under SMSQ/E.

Indeed, even today, industrial-strength applications are still being deployed that use SMSQ/E and programs running under it.

As a case in point, recently, software was installed in a factory somewhere in Germany and it is used directly in the production process. In this case, the company makes fibers (used in tissues).

material mixes etc... In short, on one end, in go raw materials, and at the other end, out come different fibres/tissues (and you'd be surprised how different the tissues are depending on the mix of raw fibers, heating, pressure, humidity etc).

The company needed to keep track of what was produced when, and also of the quality and conditions this was all produced in. Also, the production process was to be more closely monitored, to make sure that all parameters were being kept within some limits. If, for example, you use the same raw materials mix, but "cook" it under a different temperature/humidity/ pressure than the one foreseen you might get a totally different fiber. Hence was created "ÜberPro".

ÜberPro ("Überwachungs und Protokollierprogramm", i.e. Surveillance and Recording program) is used to keep a constant record of production parameters during a production run - that is the recording part. It also makes sure that production parameters don't exceed determined boundaries (the surveillance part).

Both parts were, apparently, necessary for the final client. Of course, the client has been doing this business for years, and up to now, he didn't have the needs for a computer control (or at least surveillance). For some reason it was decided to implement this now (it had to do with ISO qualifications).

The production process was and is being controlled through industrial controllers that control and pilot all the machines used in the production. The controllers are installed and maintained by another German company (Joachim Vogel Antriebs - und Steuerungstechnik). Basically, what an industrial controller does is, for example, make sure that a motor turns at x revolutions per second, not more, not less etc. (For those having some information about industrial controllers these are the "Mentor" and "IO-box" controllers). These controllers were used in a purely electro-mechanical way until now, computers weren't really used yet.

Joachim Vogel is an old QL fan and, as the PC software that was supplied for these machines is not very good and/or too costly, the idea to use something else was borne - and of course the QL came to mind. These controllers can all be controlled through a serial interface (not an RS232 but an RS435 which is sufficiently close). Commands can be sent to these devices, and parameters (inputs) can be read from them - it is especially this latter part which is interesting in the project here.

The hardware

Initially, it was foreseen that the machine on which the program would run would be an Atari TT, and then a Q40 as that became more widely available. However, this was later changed to a PC running QPC.

The reason a non-PC machine was first thought of are manifold. First of all, PCs running under Windows are not always the most stable of machines (ahem, a slight understatement here). Having the machine reboot or showing a BSOD (Blue Screen of Death) was not really what was wished. An Atari TT or a Qx0 only running SMSQ/E is a stable machine.

There also is the fact that PCs are very well

known and if your program runs on one, any whizzkid with half an hour's worth of IT education can get at the underlying PC. Giving a PC the three finger salute (ctrl-alt-del) is a well known way of halting machines. This of course would not be possible with a purely QL machine.

So, at first, it was thought that a Q40 would be the way to go. It has serial ports and is fast enough for the project.

However, as is usual for such projects, the final client kept moving the goalposts as he became more and more aware of what such a program could do for him. It then became necessary to be able to integrate the results compiled by Überpro into the client's database, written in Delphi. This in turn meant getting at the results via the network which, in turn, meant using a PC and hence QPC. So, it was decided to have this running on a PC under QPC and a new PC was duly installed in the workshop. QPC in itself, of course, is perfectly stable, and if the client can live with the inherent instability of Windows, well that's his problem..

The software

I know that the program is written in compiled Basic with a (large) smattering of machine code.

(As an aside, I'd like to say that this has always been one of the aspects of the QL that I really like - it's easy to write machine code extensions for Basic - thus all the time-critical bits can be written in fast Assembler and the more tedious bits in easier Sbasic. Moreover, debugging such a system is much easier).

Each of the industrial controllers has an "address" and several "parameters" which can be queried/changed. So, basically at least for the recording part, ÜberPro need only consist of a loop that writes a query to the drives (controllers) attached to the serial port and gets an answer back from them. And that, initially, was what the program consisted of: a list of parameters that are read from the drive and then shown in the window, one after the other. At the end of the list, the program restarts at the beginning (see figure 1, next page).

Of course, it has to be possible to add/modify the parameter list to be sent to the drives (see, e.g., fig. 2, also next page) and to save and load a parameter list from a the computer's hard disk. That way, the final client can have several parameter lists, one for each type of production. Each list can be loaded at the start of a production run. Now the controllers can be questioned, and the replies they give can be saved into a logfile. The replies given by the drives vary, of course,

Form	Name	Content	Min	Max	Unit	Min	Max	Type	Dir	
88.01	Analog Eingang 1	-4000	NL	-4000	-4000	+4000	11	-4000	+4000	6
88.02	Analog Eingang 2	-0156	NL	+0000	-0100	100	11	-1000	+1000	6
88.03	Analog Eingang nicht	-0003	NL	0	-1000	+1000	11	-1000	+1000	6
88.04	Analog Eingang 3	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
88.05	Analog Eingang 4	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
88.06	Analog Eingang 5	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
82.01	Lernknopf gedrückt	+0000	NL	+0001	0	1	11	0	1	2
82.02	Überwachung Rus	+0000	NL	+0000	0	1	11	0	1	2
82.03	Überwachung an	+0000	NL	+0001	0	1	11	0	1	2
83.01	Lernen Fertig	+0000	NL	+0000	0	1	11	0	1	2
83.02	Alarms RN	+0000	NL	+0001	0	1	11	0	1	2
88.01	Analog Eingang 1	-4000	NL	-4000	-4000	+4000	11	-4000	+4000	6
88.02	Analog Eingang 2	-0156	NL	+0000	-0100	100	11	-1000	+1000	6
88.03	Analog Eingang nicht	-0003	NL	0	-1000	+1000	11	-1000	+1000	6
88.04	Analog Eingang 3	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
88.05	Analog Eingang 4	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
88.06	Analog Eingang 5	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
82.01	Lernknopf gedrückt	+0000	NL	+0001	0	1	11	0	1	2
82.02	Überwachung Rus	+0000	NL	+0000	0	1	11	0	1	2
82.03	Überwachung an	+0000	NL	+0001	0	1	11	0	1	2
83.01	Lernen Fertig	+0000	NL	+0000	0	1	11	0	1	2
83.02	Alarms RN	+0000	NL	+0001	0	1	11	0	1	2

depending on just what was queried. The reply is always a figure (transmitted as ASCII text over the serial port) but can mean a temperature, a motor speed, a pressure gauge reading, some voltage etc...

It is, of course, up to the system installer to know what parameters need to be read from the drives and what the replies mean.

After that, the more ambitious part of the program was created - the surveillance part. This, in principle, is also pretty easy. After all, the program only has to check whether the information returned from the controllers exceeds certain predefined limits. The client can determine what these limits should be.

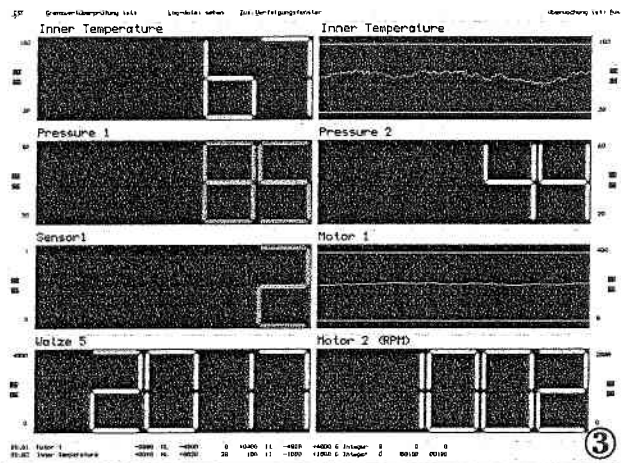
Whenever a value returned exceeds the limits, the program sounds an alarm, by sending a special value to one of the controllers (which then can start a siren, or do whatever necessary to draw the operator's attention to the fact that something is wrong). What the limits are is generally indicated to the installer of the program, who then makes the necessary definition files. This is not something that should be done by the client himself. The program can run in two modes

Form	Name	Content	Min	Max	Unit	Min	Max	Type	Dir	
88.01	Analog Eingang 1	-4000	NL	-4000	-4000	+4000	11	-4000	+4000	6
88.02	Analog Eingang 2	-0156	NL	+0000	-0100	100	11	-1000	+1000	6
88.03	Analog Eingang nicht	-0003	NL	0	-1000	+1000	11	-1000	+1000	6
88.04	Analog Eingang 3	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
88.05	Analog Eingang 4	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
88.06	Analog Eingang 5	+0000	NL	0	-1000	+1000	11	-1000	+1000	6
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82.03	Überwachung an	+0000	NL	+0001	0	1	11	0	1	2
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82.02	Überwachung Rus	+0000	NL	+0000	0	1	11	0	1	2
82.03	Überwachung an	+0000	NL	+0001	0	1	11	0	1	2
83.01	Lernen Fertig	+0000	NL	+0000	0	1	11	0	1	2
83.02	Alarms RN	+0000	NL	+0001	0	1	11	0	1	2

- client mode and developer mode. In client mode some things (such as changing the parameters) are not allowed.

Anyway, whilst checking the parameters returned against their boundaries is easy, the client also wanted some kind of visual feedback on at least some parameters. This is achieved via the surveillance screen, as shown in figure 3. There, between 1 and 8 parameters can be visualized in individual displays. The client can determine how many parameter windows he wants to be shown (between 1 and 8), the software then automatically reconfigures the screen so that the displays are always as large as possible.

The software can display the values returned from the controllers either as a line graph (which can be configured to run from right to left or from left to right) or as an LED style display - in figure 3, you can see both.



Each of the two displays (LED or graph) has its own strength and disadvantages - the graph evolves over time and keeps a record of the evolution of the parameter. The LED gives an instant and clearly readable feedback of the actual value now. You can switch between both types of display by clicking on the corresponding item to the left or right of each display window.

There is nothing to stop the client to use both displays for the same parameter, though - in figure 3, the "Inner temperature" is shown both as a graph and as an LED display, each in a separate display window.

Choosing which parameter to display visually is easy - click on the display window where you want to display the parameter, select the parameter from the list at the bottom of the screen (see figure 3) and that parameter will occupy that window.

Normally, the display colour of the graph/LED is green, showing that everything is OK. When the parameters exceed the limits (which are shown to the left or right of each display window) are

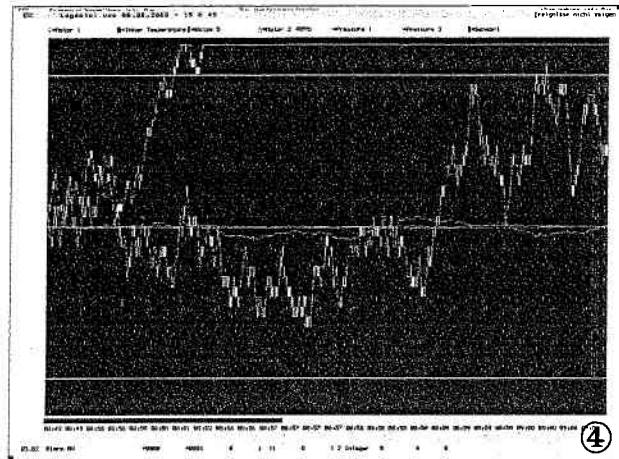
exceeded, the program shows it visually by changing the display colour to red (in figure 3, both Pressure 1 and Sensor 1 are in the red). When this happens, an alarm is sounded to let the operator know immediately that something is wrong and he could, for example, stop the production run. He could also stop the program from complaining.

Indeed, let's not forget that this is a real world application. If you determine that a motor should not go faster than, say, 2000 RPM what happens if it goes at 2001 RPM? Does this really mean that the production is ruined?

Often this will not be the case and you could continue a production run even with these slightly skewed production parameters. But how do you stop the program from complaining in such a case? After all, the client can't change the parameters (for him, the program runs in client mode). So the program can "learn" the new values and accept them as new limits...

ÜberPro can be driven either through the usual Pointer Environment mouse interface, or through external command buttons. For example, to learn the new limits, the operator pushes a button which then tells the program that it should learn the new values.

The program records the data received from the drives at user defined intervals into a logfile. When an alarm is sounded, the program logs as fast as possible. Of course, logfiles can be displayed from within ÜberPro, showing the evolution of the parameters over time (see figure 4). Each parameter is shown in 2 colours: the "normal" colour and the "error" colour, when the value exceeded its allowed limits (N.B.: it is



possible that the different colours don't come out so good here in black and white). This was a more recent addition, thanks to the different colours in high colour mode.

There again, the parameters to be shown in the log screen are selected from the list at the bottom of the screen. The logscreen is inaccessible when there is an alarm - first you should stop the alarm condition, then you might have a look as to where and what went wrong.

"Events", such as a start or a stop of an alarm, are shown by vertical bars (which can also be omitted for more clarity). When the user clicks on any point of the screen, the time and date as well as the values of all parameters are shown.

The program also has a mode where no alarm is ever sounded, which is useful for burn-in and general trouble-shooting.

I find it heartening to see that the QL is still useful (at least in the SMSQ/E guise). There is no reason why it shouldn't be able to be used in more projects such as this one...

Imperfections

Geoff Wicks

Last June Dietrich Bruder sent me an email he thought would upset me, or as he politely put it,

"Please excuse me. I think this is an unpleasant message for you."

In fact the email did not upset me as much as he feared, because I had been expecting that sort of reply. Also, unbeknown to him, the material I had asked him to comment on was not entirely my own work.

Dietrich is compiling a German QTYD dictionary conforming to the new spelling rules. This is a slow and painstaking, but necessary, task as the present "official" QTYD German dictionary is too small for serious use. As an interim measure I have prepared a dictionary of about 165,000 words and asked Dietrich to comment on the list.

He gave me a detailed and technical reply, but I shall not bore you with the full details. Basically he found the word list was a mixture of old and new spellings; had some missing

declensions and conjugations; and some spelling errors and doubtful words. His general conclusion was that it was probably OK for non-Germans to use but had too many errors for serious native German users.

What I had not told Dietrich was that I had used the German dictionary of a major PC word processor to check the accuracy of my word list. Dietrich's observations confirmed my impressions that PC spell checking dictionaries are not 100% accurate. In that word processor's English dictionary I had

found many missing plurals or strange plural forms. There were few personal names and inconsistencies in the inclusion of place names. Most verbs ending in "ise" or "ize", used the "ise" form even though the Oxford English Dictionary gives the "ize" as the preferred form for some.

I am not the first QL user to comment on the quality of PC dictionaries. Over 10 years ago Digital Precision wrote in their Spellchecker manual,

"We have not used computer methods for generating words (most words ending in 'ed' can also take an 's') - this short-cut leaves out many legal words and includes hosts of illegal words (in one case we estimated that about 50% of a supplied dictionary was illegal). It was our object to provide you with good dictionaries (ones which have all the common - and most uncommon - legal words and no illegal ones), not just big ones. In this area good implies big, but the reverse is not necessarily true."

Those of us who have written dictionaries for QL spell checkers can be forgiven a degree of Schadenfreude when we discover PC spell checkers are not 100% accurate. We know, hard as we try to be accurate, that errors creep into our word lists. Even when we know the correct spellings an occasional typing error occurs that we do not detect, because our brains are programmed not to notice an error if we understand what is meant. Can you spot, without stopping to examine them, the difference between the correct and incorrect spelling of the Dutch words 'eigenlijk' and 'eigelijk'; 'burgelijk' and 'burgerlijk' or 'onmiddelijk' and 'onmiddellijk'? Often when we add a new word to a dictionary we include all its declensions or conjuga-

tions, and sometimes we create inaccuracies like 'unique, uniquer, unquest'. This is almost inevitable when we attempt to automate the process. In English we add an "s" to make a plural so in an automated list the plural of "child" becomes "childs" and of "children" "childrens". One QL Dutch dictionary produced in this way gave the word "rectangular" a comparative "more rectangular" and a superlative "most rectangular".

Then there are the foreign words that can creep into any language. A couple of paragraphs ago I used the German word "Schadenfreude". This is now permissible to use in English, although the writer who uses it risks being accused of intellectual snobbery, because it conveys a concept that cannot readily be expressed in English. Should it be included in an English spell checking dictionary? And should we include our personal words? As someone put it to me about the content of one QTYP dictionary, "I never knew that 'Tony' and 'Tebby' were Italian words".

Another difficult area is the words that may cause offence. In general I do not believe it is my job to censor a word list for spell checking, but I am not entirely consistent. Usually I do not object to slang, swear words or sexual terms, but I have a marked reluctance to include racist or other discriminatory words. Another exception is where a word list is likely to be used by children in, say, a word game, when I impose a higher level of censorship.

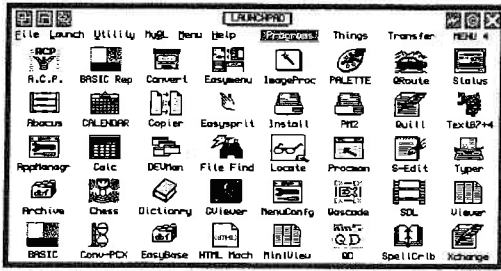
Compiling word lists for a spell checker is not an easy task, and, frankly, many of the dictionaries available for use with QTYP are substandard. This year I have concentrated

on improving the range and quality of QTYP dictionaries, although in some cases, where I have a limited, or even no knowledge of a language I have done nothing more than check a word list using a PC spell checker.

You can find the full list in the current Just Words! advertisement. Eventually I hope to post the dictionaries on the Just Words! web page, but this could take some time as I have other, more urgent, priorities. In the meantime if you are interested in any of them just email me. If you have no email please send a book of 4 first class stamps if you live in the UK, or 2 IRC's if you live outside the UK to cover the costs of sending them by snail mail.

Editor's comment: although Dietrich may not like it (he is very much in favour to the new spelling) more and more people prefer to get the old spelling back. The reason is: the new spelling does not make life easier at all. They did not get rid of exceptions, some rules did even get more tricky. In the end, nobody knows how to write things correctly. Now, 5 years after the introduction, a larger group of intellectuals, teachers, authors etc. try to return to the old spelling because the new one not only looks awful but is illogical in many ways. The root of the words is ignored in many cases to allow for the "wrong" new spelling (standard was correct, now it is standart ... to give you an example). Their idea is to say: well, it was a 5 year test, which did not work - so let's get back to the old books (cheap, as the masters still exist) and swap priority in schools, so that the new spelling will disappear again.

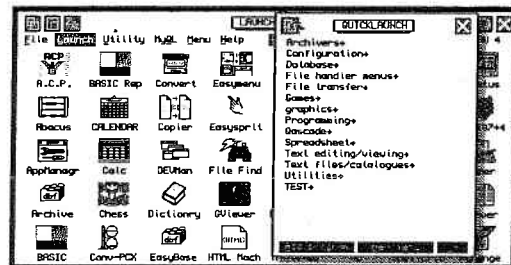
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Autograph

John Sadler

Introduction

Human relationships are very important. Any tool that can help us to make better choices of our friends and employees would help us to avoid disastrous choices. Handwriting seems to be a method for the layman to do this and if applied uniformly across all candidates would be regarded as a valid method of differentiating between candidates in employment law. So a program such as Autograph which takes you through the process in a logical manner and prints the results could be very useful.

The Program

Autograph is a liberated pointer program with all the associated problems and advantages that it entails. You must have Qlib extensions loaded and the pointer environment. Autograph opens with a screen in pointer environment allowing you to sleep, move, quit, get help or start the program. The buttons are not in the standard positions, as shown in figure 1.

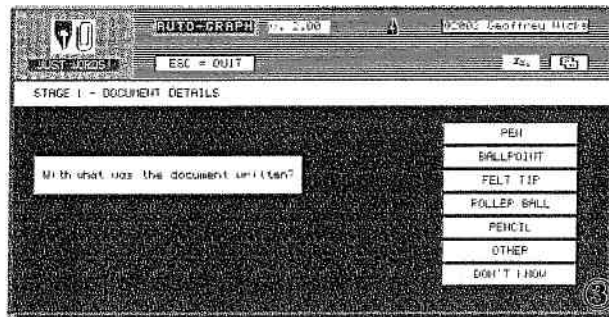


I would have preferred the buttons to comply with the standard Pointer Environment layout, as then I do not have to think to find them!

Help's first screen figure 2 describes the structure of the program. Pressing Esc how-



ever closes Autograph, so you must go to the next help screen. The second advises you to answer the questions accurately. If you cannot answer a question then choose the neutral option. It also describes the output of the program. It then gives you the option to return to the program. Next the program asks you some general questions. Firstly what the document is written on and with what figure 3, so



that it can filter the questions to suit. This is followed by ink colour if appropriate. Next it considers margins as these affect the analysis. It then asks you if you have a hand-written envelope.

Then the program moves onto general questions about the handwriting and its layout. It asks for more detail about the width of the various margins, the slant of the handwriting, the relative sizes of the ascenders, capitals, and descenders. It conti-

nues with is the ink to light to read easily, whether the handwriting is written with a large amount of pressure, and whether the pressure

varies throughout the document (by asking if there are light and heavy patches in the document). It continues with the space between the words, how joined up the writing is, and whether the text is corrected.

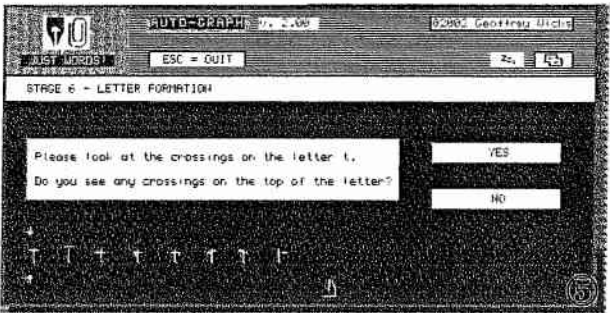
The program then considers the formation of the writing, whether it is large or small, are the letters narrow or wide, is it legible, ornate, and rhythmic. Rhythmic puzzled me until another

book suggested that you follow the writing with a cocktail stick.

If there is a signature the program investigates whether all

the Christian names are present or just their initials, the relative size of the writing, the type of underlining, its slant, and whether a line encircles it. If there is an envelope it considers the general size of the writing, and the position of the address on the envelope.

The program then moves onto the formation of the letters. It considers the shape and form of the letters m & n as shown in figure 4, the formation of the line starting the first letter at the beginning or finishes the end of the last letter of a word. It investigates the type of dots above the letter 'i' and the crossing of the letter 't' as shown in figure 5. Then it



analyses the formation of the descenders of the letters 'g' and 'y', and the presence of small loops in the letters 't', 'k' and 'x'. Finally it checks whether the letters are square or round.

The program then prints a summary of the results, with options to print the results, start again or finish.

Compared with the book "How to analyse your handwriting" the tests are not as extensive but the results are far easier to interpret. Perhaps Geoff Wicks can be persuaded to extend the analysis a little more.

The Results

The results are obtained by summing the indicators of similar and opposite characteristics from the analysis of the handwriting and indicating whether they are balanced, or a bias or strong tendency in one direction or another.

Figure 6 shows an example of first page of the results and figure 7 the second page from a specimen of handwriting. The first page shows the relative strengths of the character and the second page sums up their character.

This is the result for a person whom I happen to have an analysis by another method:

Balance between public and private

More forwards than backwards looking

Balance between self-confidence and reserve

Balance between submissive and assertive

More realistic than unrealistic

Balance between caution and spontaneity

More adaptable than inflexible

Balance between practical and imaginative

* = strong characteristic
Balance = weak and similar

Characteristics of the writer are:

Well balanced personality

Thrifty and careful

Agile quick thinker

Creative and artistic

* = strong characteristic

Here is a summary of the previous analysis:

Power to concentrate, conscientious, drive and ambitious

Resilience and perseverance

Forward thinking, practical, down to earth, economic

Warm hearted, frank, open and sincere

I leave it to the reader to judge whether the results are comparable.

This does raise the question how valid is handwriting analysis. There is no doubt that my handwriting changes from day to day or even from hour to hour depending on the circumstances. However I am sure my character does not! Secondly there is no scientific basis for handwriting analysis in the sense that there is not a clear hypothesis and verification by experiment. It is based on philosophical or psychological ideas that may or may not have a sound basis.

Nevertheless this program provides a consistent tool to carry out handwriting analysis. Hence it is a useful aid whether it is used as a diversion amongst friends or as a tool to help in choosing a candidate for a post. However if you use for this purpose, do not forget employment law.

Compatibility

The program was tried on an ordinary QL with a gold card with no problem. It was also

noted that options are displayed again when the program changes to the next screen. The main work was done on a QXL with SMSQ version 2.05. The program would not sleep without QPac2. The computer crashed once. The program cleared and wrote to the main window instead of the application window at odd times, but was still usable and could be terminated by pressing "Esc". It also seized up on the QXL if George Gwilt's save

screen utility was used to grab the screens. The program was tried with QPC demo with no problems and clipboard was used to grab the screens instead. Whether the problems are related to my version of QXL, being Qliberated, using Easy Pointer or the programming I do not know. I would have liked to see it written with TurboPTR and compiled with Turbo when the extensions could be incorporated so it could just run in the pointer

environment. Still I am sure Geoff Wicks would do his best if any purchaser had problems.

Conclusion

The program is a good implementation of standard handwriting analysis, and I am sure it will serve the purposes of anybody who wishes to consistently analyse handwriting and have a permanent record of their analysis.

All Change?

Geoff Wicks

I do not usually reply to reviews, but John Sadler has made some interesting comments at the end of his article on Auto-Graph that deserve further discussion.

Before I come to these, just a couple of quibbles. There is a factual error in the review. You do not need to have the QLiberator extensions to run Auto-Graph on your system. All Just Words! programs have these extensions built into the program.

I am sorry John had technical problems running Auto-Graph on a QXL machine. This surprises me as Auto-Graph was written on a QXL system but, unfortunately, I cannot do any further tests as the QXL now has a new home.

Apart from these points John has written a good summary of the program with some interesting observations on handwriting analysis that echo comments in the program's manual. What interested me most, however, was John's comment that he would have preferred the program to have been written in TurboPTR and compiled with Turbo rather than being written in EasyPtr and compiled with

QLiberator. My recent experiences as a member of the QWord development team have also encouraged me to think along these lines because it brought home to me some of the weaknesses of EasyPtr.

Those of us who have struggled to learn some form of pointer programming are deeply indebted to Albin Hessler, the author of EasyPtr. At one time pointer programming meant using QPTR which, put at its kindest, is a skilled programmer's program for skilled programmers. The manual and sample programs are far too complicated for we lesser mortals to understand. EasyPtr also earns few brownie points for simplicity, but you can struggle through and write simple pointer programs to serve as a starting point before tackling EasyPtr's more complicated features. I would still recommend EasyPtr for first attempts at pointer programming.

Nevertheless, as John infers, strictly speaking, EasyPtr is not "pure" pointer programming because there is an "interface" between the programmer and the pointer environment. This interface imposes restrictions on the programming possibilities, so that, for example, it would not have been possible to have written QWord using

EasyPtr. A more recent complication is the inability of EasyPtr to use the new colour drivers, and we should perhaps be thinking about alternatives.

I wonder how easy it would be for an EasyPtr programmer to step over to "purer" but more complicated programming via QPTR or TurboPTR. A major difficulty of pointer programming is learning the jargon, and I presume EasyPtr helps a programmer to understand this.

Should anyone wish to try this step, I would suggest a route via TurboPTR and Turbo is better than a route via QPTR and QLiberator. My reason is that the former programs as being actively developed while the latter are not. Indeed we have recently had a scare about SMSQ/E and QLiberator compatibility.

In practice it would not be easy for Just Words! to move from EasyPtr and QLib to TurboPTR and Turbo. Just Words! has a distinctive house style and transforming this from one programming system to another would not be easy. I would also have to learn full TurboPTR programming, which I expect would take time.

Suppose, however, I were to redesign the Just Words! house style to take advantage of the new colours then I would take

a serious look at TurboPTR. During the development of this program, I have twice done some testing for George Gwilt, its author, and I can testify from this experience that he listens

to any comments you make and incorporates your suggestions in his work. I also know that he made changes to TurboPTR to allow QWord to be compiled.

This combination of a skilled programmer and a listener is all too rare in the QL world, and is one reason why TurboPTR deserves far more attention than it has yet had.

Eindhoven this year & Eindhoven next year

Jochen Merz

I have been to some Eindhoven QL shows this year. Thanks to Sjef for keeping it up - I really like to come to this event as often as possible. Unfortunately, Roy & Tony could not make it for various reasons, pity!

Here is a photo made by Carlos Brennecke from the last show ... maybe some of you who have visited in the past may get withdrawal symptoms and come along next year.

Speaking of next year and Eindhoven: after I published the poll results in the last issue I had even more replies saying they would like to come to Eindhoven.

So, we have tendency from all the QL Today readers towards a show in Eindhoven.



As it seems that a QL 2004 show sponsored by Quanta needs to be held in the UK anyway because the vast majority of the Quanta members lives in the UK, I still feel we should have a large meeting as well in Eindhoven - maybe a QL 2004 in the UK in the first half of this year, and a QL 2004 in Eindhoven in the second half. It would be nice to meet a few people who who have not been to shows for a long time (or even not at all).

Therefore I would like to see an agreement for a date for a "big" Eindhoven show - one per year, where everybody will be ... what do you think? There have been so many interesting Eindhoven shows in the past, followed by a visit of the local "standard" Chinese which used to be interesting too - why not repeat it?

Of course, I personally will come to the other shows during the year if possible - but I think one big show would be great!

WHEN VARIABLE

Dilwyn Jones

A little used and documented facility in SuperBASIC.

During October, Tony Tebby surfaced on the ql-users mailing list to join a thread about WHEN ERROR and WHEN VARIABLES. I had initiated the correspondence myself and the original subject turned to the little-documented WHEN construct in SuperBASIC.

Having been trying to discover something else, the following statement popped up:

"Offset \$C8 is described in my book as 'number of watched WHEN variables' "

To which, Tony Tebby replied: "Ah! Jan Jones When variables - has anyone ever described this wonderful unimplimented facility?"

Of course, that got me going, I had to respond to this. So here is the information I found out in due course.

It seems a wonderful facility, which allows you to set up a condition test which will be watched by SuperBASIC, along the lines of the WHEN ERROR structures described by David Denham in past issues of QL Today in his articles about error trapping. Something like:

```
WHEN entry=-1
PRINT"Don't enter negative numbers, mate!"
RETRY
END WHEN
```

(Don't enter the above example, it won't work)

The only two sources of documentation I've found so far have been the Minerva manual and Rich Mellor's SuperBASIC Reference Guide. There does not seem to be any reference to the facility

in Jan Jones's 'QL SuperBASIC - The Definitive Handbook' (Jan Jones was author of QL SuperBASIC). From these I learned that WHEN VARIABLE only seems to work on Minerva and later Sinclair ROMs to varying degrees - version JS, MG etc of SuperBASIC. It is not supported on versions AH or JM of SuperBASIC, and is also not supported by SBASIC/SMSQ-E. It was also supported by some Thor ROM versions, the Thor XVI apparently supported WHEN CONDITION. Minerva claims to be able to use WHEN, here's some info from the manual:

The Minerva manual lists an example along the lines of the above:

```
WHEN a=6
PRINT 'a is now six'
END WHEN
```

Single line WHEN should work, like the equivalent FOR, REPEAT, IF etc., e.g.

```
WHEN a=6:PRINT'a is now six'
```

When Variable processing can be turned off with WHEN a (that is, specifying a variable name but no value test), and WHEN anything (i.e. any name) will turn off all current WHEN processing.

In fact, the tested condition can be most of the conditions you could put in an IF..THEN statement, the one limitation being that the statement has to start with a valid variable name. The SuperBASIC Reference Manual quotes the example:

```
WHEN a-10=b
```

as being acceptable, but

```
WHEN 10-a=b
```

would not be acceptable.

Although I have referred to it as WHEN VARIABLE (since it's primary use is to watch or keep an eye on the values of named variables as the program runs - WHEN a=6 keep an eye on the variable 'a' and when the program modifies it, the WHEN a=6 structure is called), it is probably more correct to refer to it as WHEN CONDITION since you can include most conditions you could put into a IF THEN clause as long as it starts with a variable name.

Note that if the WHEN condition includes tests on more than one variable, all must be defined beforehand or an error may occur when the first one is accessed and of course the second has not yet been defined.

Like WHEN ERROR, place the WHEN structure somewhere where the program will run through it to find which variables are being watched - the program makes a note of the variables being watched and continues after the END WHEN statement. The code between WHEN condition and END WHEN is only executed when the test is called:

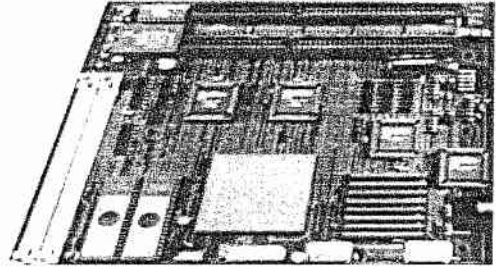
```
100 WHEN x = 10
110 PRINT 'x is now 10'
120 END WHEN
130 REPEAT loop
140 INPUT'Guess the number (1-10) ';x
150 END REPEAT loop
```

Run this short program. It meets the WHEN statement at line 100 and so flags the variable 'x' as being under observation. It ignores the code up until the END WHEN in line 120 and goes through the REPEAT loop asking you to enter a number from 1 to 10. As line 140 uses the variable 'x' the INPUT x statement triggers the WHEN clause and so the program jumps to the code between lines 100 and 120 to see what it should do about the value of x. If you have entered anything other than 10 it decides that it should not execute the code between WHEN and END WHEN so resumes where it left off after the INPUT statement. If, however, you entered 10, it suddenly realises that the test on 'x' is now true (i.e. x=10) so it must execute the code between WHEN and END WHEN and reports that x is indeed equal to 10. A trivial example, but as good a demonstration as any of how WHEN CONDITION works. WHEN x (i.e. naming the variable without a condition test) turns off that particular WHEN operation.

The SuperBASIC Reference Manual states that on QL ROMs after version JM and on Thor XVI up to 20 such WHEN clauses may be active. Presumably the same restriction applies to Minerva. Remember that SMSQ/E does not support this type of WHEN structure. It is not particularly reliable on versions JS and MG Sinclair ROMs, although Toolkit 2 does aid reliability. In theory, WHEN processing is turned off by commands such as NEW, CLEAR, LOAD, LRUN, MERGE and MRUN, although this is not reliable unless Toolkit 2 is present.

I would welcome further information on this facility, and also any information on support of this facility by Turbo and QLiberator compilers - can they reliably compile these structures, and would a compiled program run on older Sinclair ROMs or on SMSQ/E systems not normally allowing the WHEN CONDITION structure. If so, programs written on a version JS ROM to use WHEN CONDITION structures and then compiled could run on any system.

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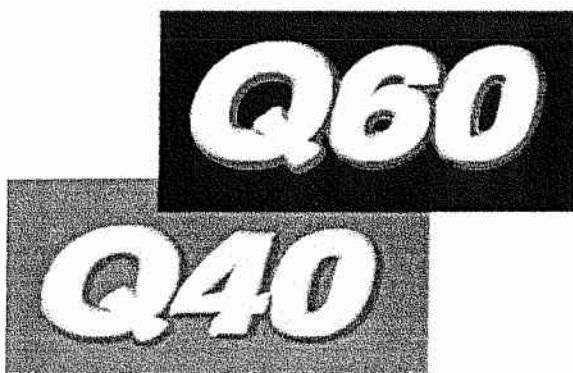
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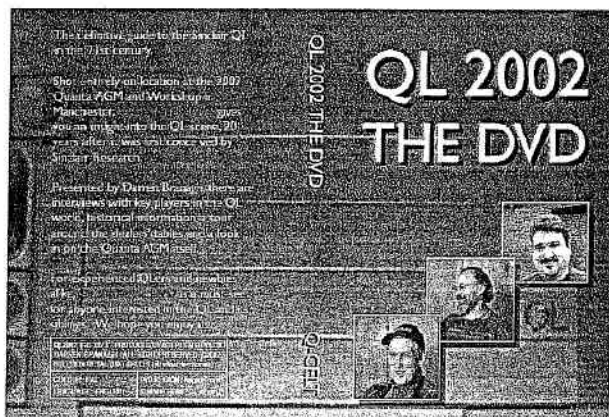
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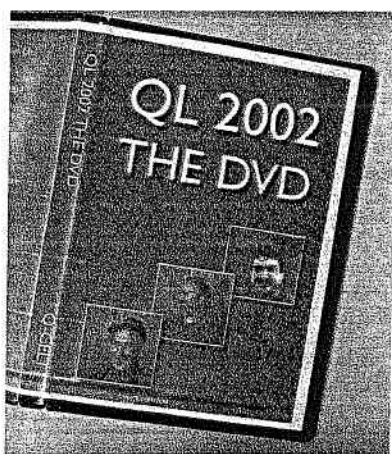
QL 2002 - THE DVD

Dilwyn Jones

It has often been suggested that a video about the QL should be produced. Steve Reyal and Darren Branagh have gone a step further and produced this DVD all about the QL.



The DVD cover (above) and the case (below)



Filmed mainly at the Quanta AGM at Manchester, England, in 2002, this DVD gives an insight into activity at Quanta workshops, introduces you to some of the well known names on the QL scene and uses DVD facilities

such as menus and text presentations to go one step further than an ordinary video tape would. At about half an hour's duration for the video footage and about 50 minutes total running time, this gives the DVD enough time to offer plenty of footage and information, without being too long to watch in one session.



Darren Branagh

It starts off with a short piece to camera by Darren Branagh welcoming viewers to the DVD and to the Scout Hall

in Urmston, Manchester, before showing a menu offering a few choices of how to proceed:

Play
Scenes
QL background info
Funnies
Internet access PC/Mac

This DVD will play on both domestic DVD players and computer DVD players capable of playing video DVDs. If you have a DVD player on a PC, for example, some additional features such as access to a complete copy of the QL Emulators CD and its free software and direct access to some internet facilities are available - select Internet Access PC/Mac and it points to instructions for the installation of "DVD@ccess". These are plug-ins which enable the on-disc weblinks to work on PCs and older (pre-OS X) Macs. Just navigate to the appropriate folder on the disc, run the installer and reboot. Internet Explorer should activate whenever you click on a link in a menu (I'm going by what Steve Reyal told me here, as I do not have a DVD player on my PC).

Select the PLAY option and it briefly starts with a map of the area and brief information about the local QL users group (NEMQLUG), before Darren Branagh takes us on a quick video tour of the workshop area, where we are introduced to traders and their customers and some of the QL products on offer. The meeting was fairly quiet at the time this was filmed, so it affords plenty of opportunity to see the activity at a QL meeting if you have never been to one, and for close-ups of stands, products and faces. For example, there is a good shot of the equipment Tony Firshman has connected to his QL via the I2C interfaces attached to a Minerva Mkii unit, where you see tokens inserted and sweets dispensed, for example.



Tony Firshman
being interviewed

The DVD continues with an interview of Tony Firshman, who is one of the longest serving QL traders around (TF Services). During a fairly lengthy interview we are introduced to all sorts of devices such as an original QL Kludge or 'Dongle' - the original QL had an external EPROM board produced in a hurry while the operating system was unfinished - and many of the devices Tony has produced over the years on the QL scene, as well as a brief history of how he got into his QLs in the first place.

From there, the DVD goes on to present some scenes shot at the after-show dinner (the event itself was a 2-day event with a get-together planned at a local restaurant on the Saturday night) - a good introduction to the social side of such QL meetings.

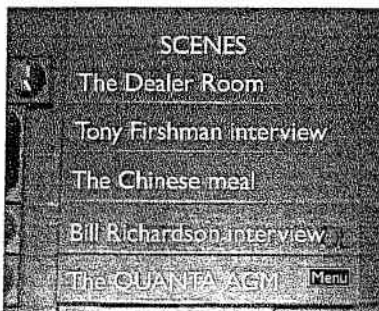


Bill Richardson
being interviewed

From there, we go to an interview with the baseball-capped Bill Richardson. Bill is another

long-serving QL trader. Now past the age by which most people hope to have retired from work, he recounts the early days and how he got into selling Spectrum, QL and Z88 products and accessories. I learned quite a lot from this interview, even though my long connections with the QL scene had made me think I knew all there was to know about QLs! For example, Bill recounts his early connections with Sinclair, how he was offered some 23,000 machines at one stage, how fate took a hand and so on. Quite an interesting interview where we are told quite a lot about the early history of the QL scene.

After the interview, we are once more taken back to the meeting room for some quick shots as the traders pack up, then a brief look at a Quanta Annual General Meeting, where we see the (then) Quanta committee and the assembled members listening to the committee's deliberations and see one or two old faces such as David Batty of Sector Software who are no longer active on the QL scene, but keep in touch from time to time.



The 'Scenes' menu

The Scenes menu simply takes you to the various sections of what you have just seen, useful if you just want to review one particular

section. Incidentally, if you have trouble getting back to the opening menu, move the highlighter down to the small MENU symbol bottom right and select this - I had a blank moment and got stuck for a little while at this point.

QL Background Info takes us to another menu where we can choose from informatin about:

The Original Sinclair QL

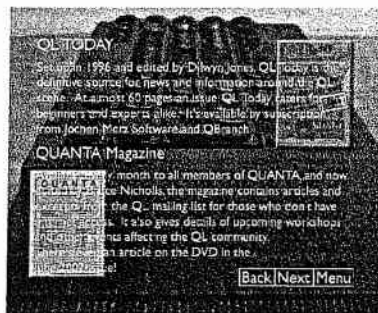
"State Of The Art"

QL Emulators

QL Traders

These are text screens (no commentary) with pictures of the various systems and equipment, all set to a gentle music background. In fact, if you like seeing QL material of historical significance, anything from old software to old books, this is quite interesting - it's well laid out, simple to follow and gives ample time to view and read the information presented.

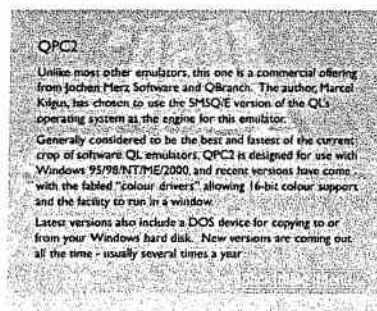
"State Of The Art" is accompanied by more upbeat music as you might expect to describe more modern developments such as SMSQ/E, Q40/Q60 and of course QL Today.



The QL Today
screen!

QL Emulators gives brief descriptions of well known QL emulation systems, from QXL and ST-QL to Qemu-

Lator, QPC and even the less well known QLem system.



One of the
Emulators screens

QL Traders, as you might expect, simply lists names and brief contact details for most of the current crop of

QL Traders. A nice feature is that the trader concerned stays on screen until you select Next from the sub-menu at the bottom of the screen, giving you time to study and copy any details without having to pause the DVD. I suppose a nice extra touch could have been to include photos of the traders on these screens, to allow Qlers who only deal with them by post or email to put faces to the names, but the necessary information is all there even if it runs the risk of soon being out of date as people change email addresses or move house, for example. I sent

information to Steve Reyal about one or two out of date details on the review DVD and was pleasantly surprised when he quickly came back to me to say that fully intended to keep the DVD up to date and would soon release an updated version.



One of the QL Traders screens

Funnies is a short section where you get to see some out-takes and lighter moments at the workshop

- at one stage Darren evens warns you "risk permanent blindness watching him pull funny faces." Not much of interest here beyond having a good laugh at things not going quite according to plan - mistakes happen even on the QL scene from time to time!

Steve Reyal is an experienced video editor and both the experience and enthusiasm shine through in this production. For example, the menus appear on a soft-focus QL, with the titles overlaid on the lines of the black panel above the microdrives on an original QL. I would make some slight criticism of the audio on the DVD - the Darren Branagh monologues and parts of the interview are a little distorted. When I asked about this I was told that the audio was recorded

unsynchronised onto an audio cassette recorder or dictaphone, as it was unrealistic to depend on the camera's built in microphone for something like this. In fact, as much of this was shot with the presenter and interviewees in vision, lip-synch was non-existent and Steve had to resynchronise the video and audio himself for editing, but he has made a good job of it and you don't really see any evidence of this when watching the video part. A lesser moan is the background music. It is effective and gentle, pleasant even, but for me a bit repetitive, as the same music is used in many places. Quickly fixed by a clever device known as a volume control, though!

My other moan about this DVD is the price. At ú29.95 it is quite expensive, but the price may well go down as the price of DVD media goes down. In one sense it is worth it, because you do get a fascinating insight into Quanta workshops, the QL scene and some history into the bargain. As it is, I do think this CD is just about worth it, if the price could be reduced by, say, 5 to 10 pounds it would be a bit of a must-have for QL enthusiasts. Quite clearly a lot of work has gone into this by two guys who are QL enthusiasts themselves and this shows in an end product which even they would not have expected to sell in large numbers, but nonetheless was one of those projects which needed to be done and has been done quite well.

Verdict: buy it, especially if the price comes down a little.

Small Ads

Who Wants a Free QL/Aurora?

My QL/Aurora is gathering dust in the basement and has not been operated for a couple of years. That seems a pity and I have no intention to use it again as I prefer to run a QL emulator (QPC2) on IBM hardware. I therefore offer it free FREE to anyone who can come and pick it up. Since I live in Geneva I imagine there are QLers who come to Switzerland by car (or even private plane) for skiing or summer holiday or perhaps with a girlfriend and would love to get my beloved QL for their own use or for somebody else (the girlfriend? Contact me by e-mail at:

ianpizer@compuserve.com (Ian Pizer)
if you think you might be interested. Perhaps worth coming over just to get a free QL!

FOR SALE

Hard drives priced at £5:

5 x 270Mb Seagate ST3295A
1 x 210Mb Conner CPS210A
1 x 212Mb Maxtor 7213A

Hard drives priced at £7.50:

1 x 540Mb Seagate ST3660A
1 x 420Mb Conner CPS420A

All hard drives guaranteed to work on Qubide, Q40/60

Canon BJ-10sx printer with sheet feeder and case - £30
Canon BJ10-ex printer with sheet feeder and case - £35
Kodak DC-200 Digital camera, case, 4mb fash card, serial cable - £55
Kodak DC-215 Digital Camera, case, 8mb fash card, serial cable - £65
2 x US Robotics Couier V90 Modem - £35
Epson Stylus Color Printer - £30
Postage extra at normal postage rates depending on weight

Tel. +44-(0)1773-741164 - evening after 6pm GMT
Email: derek@q40.de (Derek Stewart)

QL EXTRAS

George Gwilt

I have only now been able to access the CD sent with a recent issue of QL Today.

That explains why I have not commented earlier on the extremely useful set of files on QL Extras.

I notice two omissions from the list of sources. The first is QPTR, which of course is the official Pointer Environment set of extras. The second is TPTR_EXT, which is part of TurboPTR. TurboPTR was produced to enable programmers to do more or less what they can do with QPTR but with the ability to compile the resulting S*BASIC programs by TURBO. Naturally I made sure that there would be no clash of keywords between QPTR and TPTR_EXT.

The keyword WHERE is, I think, listed as being part of TK3. In fact I believe it was one of the extras required by IDIS, the disassembler from PD.

QPTR and TPTR_EXT

The list of extras from the CD shows that QPTR has three clashes. They are HOT_STUFF, OUTLN and RMODE. HOT_STUFF is in hot_rext and SMSQ. OUTLN features both in SMSQ and in Outln_rext. I would hope that these common keywords do the same thing in each set of extensions.

There are two clashes with TPTR_EXT. CH_BAS appears also in io2m_byt. I have no idea what io2m_byt does with CH_BAS. TPTR_EXT sets it as a function which returns the "correct" channel address for a con or screen channel. The "correct" address is the actual address of the channel with \$30 added if PE is in operation. USE is part of the DIY kit. The version of USE in TPTR_EXT is intended to be an updated version of USE which works with SMSQ in both the master basic and with daughter basics.

For completeness I have listed the keywords of QPTR and TPTR_EXT in the appendices.

APPENDIX A QPTR Extras

CH_ITEM	CH_PTR	CH_WIN
DE_ADRW	DR_AWDF	DR_IDRW
DR_LDRW	DR_LWDF	DR_PPOS
DR_PULD	DR_UNST	HOT_STUFF
LBLOB	MKPAT	MK_AOL
MK_APPW	MK_ASL	MK_AWL
MK_CDEF	MK_IOL	MK_IWL
MK_LIL	MK_RWL	MK_WDEF
MS_HOT	MS_SPD	OUTLN
PICK	PREST	PSAVE
RD_PTR	RMODE	RPIXL
RPTR	SPHDR	SPLIN
SPRAY	SPRSP	SPSET
SPTR	SWDEF	WBLOB
WSPRT		

APPENDIX B TPTR Extras

ABLUE%	ACR	ACR1
ACYAN%	AD_SUB	AGREEN%
AMAGENTA%	ARED%	AWHITE%
AYELLOW%	BASIC_SRT%	BCHWIN
BFRAME	BFREE	BLACK%
BLUE%	BOUTL	BRCHP
BRPTR	BRSPW	BSPAL
BSCHZ	BSPSET	BSVPW
BUNST	BWBLO	BWRSET
BWSPR	CH_BAS	CL33TO64
CLOS	CYAN%	D_GREEN%
D_LDRW	D_RED%	G_PR
GETCU	GETPX	GLEN
GREEN%	GREY%	HX
IS_POINTER%	L_GREEN%	L_RED%
M_ADRW	M_DRBDN	M_DRBDR
M_IDRW	M_LACT	M_LMEN
M_MACT	M_MDRW	M_MHIT
M_ODRW	M_PRPOS	M_PULLD
M_SETUP	M_UPBAR	MAGENTA%
MODE%	MUSTARD%	N_CHAN%
OHIT	OPE	PNAME\$
RED%	S_PR	SET_PTR
SPR_SZE	STIOB	STLOB
SWIN	USE	W_MAX
wd_pappl%	wd_plitm%	wd_pinfo%
wda_blen%	wda_clen%	wda_ext%
wda_ncol%	wda_nrow%	wda_nxsc%
wda_nyxc%	wdi_pobl%	WH_PTR
WHITE%	WRPTR	WRPTRT
YELLOW%		

As usual the QL Users internet group has been giving me subjects to consider in the last two months. The first of these has to do with the hoary old subject of printing from QLs and Emulators. I have dealt with this at some length in previous columns but some of the comments on the list bear some further discussion.

Some of the users had methods of printing which were quite interesting. Robert Newton sent the output of his Z88 (not strictly a QL component but it does suffer from the same problems, if not more, as the QDOS/SMSQ systems so it is worth mentioning) directly to another computer which then spools onto a machine with a USB port. A devious way of getting printed output but, if you have the hardware and it works why not?

I remember seeing Steve Hall's QL tower case setup which used to send the printed output over the network to another QL with a basic SuperQ board memory expansion and parallel port. This meant that the files had left the main machine and freed it up to continue to work while the second QL did the printing.

Hard Print

Of course all of the above is subsidiary to the real sticking point which is the growing lack of any modern printers which can handle the output from a QL. I have mentioned this subject many times in this column but it still crops up in letters and emails as well as on the

User Group email list. At the moment I can see no real solution for native hardware. One of the German software developers did write a print filter for QPC2 which would accept a set printers codes for printing from a QL program and then pass these to the Windows print spooler. I never saw this program but I gather that it was pretty far into its development when the author dropped out. This means that such a thing is possible but it is probably not that easy.

One other thing I have mentioned here in the past is the way that the mainstream computer industry is propelling itself toward the elimination of ports on PCs. Serial ports are fast disappearing on many of the newer boards and, as more and more printer manufacturers move toward USB printer interfaces then the trend towards the loss of the parallel port becomes even more inexorable.

When this happens there will be no incentive for the printer manufacturers to add the parallel port to any of their new models and we will be left looking at those models which are made for industrial purposes - and those bear a hefty price tag. Adding a USB port to a QL is not an easy task (or so I have been told) and, even if the hardware is available the drivers would need to be written. Although writing the drivers may not be that hard for some people interfacing with the printer would have just the same problems as with the older parallel printers. What we

really need is some kind of printer spooler which will accept the codes put out by QL printers and give out the driver commands that the manufacturers expect their own printer drivers to supply. That, of course, is no easy task.

As I have mentioned before, I am no programmer but, if we could get such a print spooler written and some method of interpreting the output in a way in which a modern printer driver translates its codes we would be some way towards solving the problems.

If you reduce the problem to the lowest level you will find that all that happens when the content travels between the computer and the printer is that one set of digital code is translated into another set of digital code which, when passed to the printer, produces either a graphical object or text. I know this is simplistic but there has to be a way to understand and get around it.

Blink and You Missed It

I did mention before that Epson make a low cost laser printer (the EPL 6100) which does support ESC/P2 codes and, therefore will also support the other Epson codes such as the LQ. As is usual with these things EPSON have now discontinued that model but are making an EPL 6200 which seems faster and has the added duplex facility (the ability to print both sides of a sheet of paper). Quite how this will be handled by a QL is another matter but I may be looking to buy one to test it. As before, users should avoid the EPL 6200L since this model does not have the ESC/P2 language. If there is any further news on this I will present it to you here. It does occur to me that we

seem to have some sort of power over the mighty Epson company. I have only to praise or suggest one of their products might work well with the QL community and that product gets discontinued. Does the boss of Epson read QL Today I wonder.

Text Me Up

Another common enquiry that I get here is about Text 87. The veteran word processor has been languishing in the doldrums for a while because it will not work with the new colour drivers. This is a condition it suffered from when the Aurora was first introduced and it relates to the peculiar way the program writes to the screen.

Jochen and I have had problems because of a lack of Text 87 for a while now because all of our manuals are in Text 87 format and the only way to use it is to boot into QL colours. The major problem with this is that, once you have configured your new programs to run in High Colour Mode, they do not work so well in QL Colour Mode. This is the kind of situation in which you just cannot win and you find yourself flipping from one mode to another just to get a manual revised and printed.

When the drivers were first introduced I asked Fred Toussi (Text 87's author) about an upgrade. He was, in general, quite happy to do this but the actual process of getting that upgrade done has dragged on for a while now. The initial concept was an extra mode for SMSQ/E which would allow Text 87 to work. I must say I did not really understand how this would work, but then I did not understand the problem either.

Marcel got involved a while ago (mainly, I suspect, because he got fed up with Jochen and I whining on about it while we were all together on QL trips). He engaged in a conversation with Fred which went along the lines of:

```
REPeat CHAT_LOOP
Marcel 'What is it that you
need?'
Fred ' I will fire my old
Atari up and get the
codes of it this
week'
(PAUSE 1 MONTH)
Marcel 'Have you done it
yet?'
FRED 'I will do it this
week'
END REPeat CHAT_LOOP
```

After a while Marcel realised there was no EXIT in this and edited it to be:

```
REPeat CHAT_LOOP
Marcel 'What is it that you
need?'
Fred ' I will fire my old
Atari up and get the
codes of it this
week'
(PAUSE 1 MONTH)
Marcel 'Have you done it
yet?'
FRED 'I will do it this
week'
IF DO_IT_YOURSELF$='YES' :
EXIT CHAT_LOOP
END REPeat CHAT_LOOP
```

A week after the Byfleet show (and another bout of whinging from Jochen and I) Marcel sent me a couple of test versions of a patched Text 87. These seem to work very well and one version even has a tasteful grey background. There are problems here though, so don't all start asking for an upgrade yet. The major one will be getting Fred's permission to actually distribute this version and we will be working on that. The other problems concern how Text 87 is configured. The program is designed so that the user takes the master

disk and runs a configuration program which then makes a working copy on the selected destination drive. This is set up in such a way that a program that has been configured once cannot be re-configured. The version I have here was configured to run from Win3_T87_ which I did not have so I had to create it to test the program out. This could probably be solved by getting Marcel to patch the master copy of the program so we are hopeful that a new version of Text 87 may be available soon.

SMSQ Envy?

Peter Graf popped up on the QL Users group briefly to give us the benefit of his wisdom. We had a further SMSQ licence discussion (I will not go too far into the details in case you all fall asleep or start slitting your wrists in despair). He said that he had not used SMSQ/E after Tony Tebby had stopped producing the code because 'he did not trust' it. The version he has been using is of course the version that had to be 'patched' to work with the Q40. The current version works very well and has had several long standing bugs picked up and repaired as well as many enhancements introduced.

It is not unlikely that a new pair of eyes will spot flaws in code that has been part of SMSQ/E for some time and Marcel seems to have done a very good job of fixing them not to mention the other people who have added bits and pieces to the code.

It does seem very odd not to try the new code especially since, unlike Windoze, you don't really have to do anything except LRESPR the executable. It also seems strange

to be so negative about something that has gained a lot of praise from all who have tried it. Do I detect a whiff of sour grapes here?

Europe on a Laptop

October was an unusual month because we managed two separate shows in Europe. One in Germany and one in Italy. Both were very enjoyable and both were very useful in terms of the conversations we had between the traders and innovators who were present.

The show in Germany is always fun. It is set in a very beautiful part of Germany and well worth a visit if you get the chance. This year's show gave me the opportunity to give Marcel my MinisQL so he could look into the problems with The Gold Card version of SMSQ/E. Most of the indications were that something in the Qubide code was interfering with the startup sequence of SMSQ/E and we went to great lengths to get a copy of the code from Phil Borman. In the final event it would seem that there was a long standing conflict of memory allocation that the combination of SMSQ/E and Qubide had only just managed to avoid for all its existence. Marcel managed to isolate the fault and fix it.

The Italian show at the end of October was also a very enjoyable affair. If there is one thing that is guaranteed to increase the enjoyment of being at a show it is the enthusiasm shown by those who attend and the Italian show definitely was full of enthusiasm. An added bonus at the show was the presence of both Natsa and Jonathan Dent - both of whom have plans for QDOS/SMSQ developments.

Nasta still has a great enthusiasm for now QL hardware and was, once again, showing us plans for new developments. The first step in this will be a new batch of Aurora motherboards which may be available soon. Very timely considering the recent release of the Aurora colour drivers. He is not planning to change very much on the new batch although he is going to use a few of the better connectors for the serial ports to make it harder to plug the cables in wrongly. He is also looking into the possibility of adding a flash ROM to the Aurora meaning that you could have the ROM available at boot up. The Aurora was designed with the capacity for larger ROMs but this has never been used so far. Having a Flash programmable ROM in its place will mean you can also re-program it when a new version becomes available. This is very much in the 'ideas' stage. Hardware-wise it would not be hard to implement but the software would take some investigation. One possible problem could lie in the Super Gold Card Ingot code. The only copy we have of this is a bad photocopy that Stuart Honeyball gave to Keith Mitchell a couple of years ago. The sale of the new Aurora boards should generate enough money to get the new Qubide up and running. This is fully designed and Nasta only needs some cash to get the production underway.

QL'ers on Film

The Italian shows also get filmed. I can remember a while ago, when the Italian 'Beginners' Club' came to Eindhoven, they brought a camera and filmed all of the stands and talks. They have certainly filmed all of their own shows

and, at the last one, they had a series of DVDs of these shows.

One of them was the last show in Regio Emilia for which I dragged my Q40 all the way there as hand luggage and gave a demonstration of its abilities. Davide did a masterful job (well I think he did - I cannot tell because I cannot speak or understand Italian) of translating my talk on the Q40 to the assembled masses. I was given a copy at the show so now I have it on DVD!

Christmas Entertainment

This time of year I usually dust off the punning machine to bring you a range of Christmas entertainment for computer enthusiasts. This year is no exception (did I hear a collective groan then?)

So here we go with my seasonal compilation:

Here are a few films that may be showing over the Christmas Break:

- The X-Box Men
- The Incredible Bulk Storage
- Bring Me The Printhead of Alfredo Garcia
- The League of Quanta Gentlemen
- Das Boot
- The Great ESCape
- Donovan's (mem)Brane
- All Quiet on the Winchester Front
- Dilwyn Jones and the Launchpad Crusade
- Die Hard Drive (German Version)
- ED The Extra-Densical
- The Qubide of Frankenstein
- Alien Format - The Director's half-cut
- Trains and Planes and Tony Firshman's Bicycle (or Mr Herme's Holiday)

Linux users have got together to get Quentin Tarantino to make a film about assassinating the head of Microsoft:

- Kill Bill

So Microsoft are now sponsoring the new Batman movie:

- Batman v the Penguin

(in which an irritating, smug upstart gets a battering)

There are a few Shakespeare plays in the theatre that may be of interest:

- I-Macbeth

- Much Ado about THINGS

- The Taming of Win2_

Some songs contesting for attention include:

'Super SCSI, So Fragmented, XP is Atrocious' (you have to sing this out loud)

We have Jochen Merz and Dilwyn Jones dueting on a

song asking for contributions to the magazine to the tune of a George Michael Song:

'I Want Your _txt'

And two pointer driven pop songs:

- HIT me Baby One More Time

- Da DO DO DO

Seasons Greetings

All that is left for me now is to wish you all Merry Christmas and a Happy New Year. When we next send QL Today to press, in 2004, it will be the QL's 21st birthday and the magazine will be heading for its ninth year of publication. It is fairly remarkable that a system can exist for so long and still have such an active user base. Mostly, this is due to the efforts of a small number of people like Dilwyn, Jochen, Marcel etc. but it is also down to our loyal and interested following. The

people who play around with the QL in all its guises and forms. There have been some divisions in the QL community over the last few years and I hope that the 21st birthday of this machine may see some coming together of the more divergent sections in order to take us forward once again. Right now we have a good and stable platform from which to work - let us move on from there.

Once again, in the spirit of the season, *The honourable mention in despatches* goes to you all, our readers and users. See you all next year at a QL show near you.

And for those of you who have young children at home **BEWARE!** There is an episode of the Tweenies that features Dilwyn (QL-Users subscribers will have read his admission)





The QL Show Agenda



London Quanta Group Workshop - London (UK)

Sunday, 11th of January, 10:00 to 16:00

**Welsh Congregational Chapel, 90 Southwark
Bridge Road, London, SE1, England**

Almost opposite the junction with Marshalsea Road.

No congestion charge on Sundays. Parking available in front and nearby.

Open to the public from 10.00am to 4.00pm.

US QL Show 2004

Sat/Sun., 24/25th of April

Quanta and NASQLUG are pleased to announce the US QL show to be held 24/25 April 2004

Saturday 10 AM to 5 PM and Sunday 10 AM to 3 PM

at the Days Inn International Drive, 7200 International Dr Orlando, FL 32819.

Phone: 407-351-1200, Toll-Free in US: 800-224-5057, Fax: 407-363-1182.

Their room rate is \$49.95 per night for 1 to 4 persons (contact Diane at the hotel directly for this price). (Plus 11.5% tax). However, rates as low as \$35.95 are available at Discount Hotels and Resorts US phone (800) 479-1406 or www.discounthotels.cc Make sure to specify Days Inn at 7200 International Drive since there is another Days Inn on International Drive.

Orlando International is a major airport with connections to all over the States plus Europe. Rental cars are very inexpensive in Florida. There is a shuttle, \$13, from the airport to the Days Inn. However, if you will need a ride, contact Al Boehm, and we will see what we can do. Reservations should be made as early as possible as the area does get busy during the spring and room sell out fast. Disney's Magic Kingdom is super for kids and the young at heart, but Disney World also has other sections more tuned for adults such as Epcot (Future World and World Showcase) and Pleasure Island (the wicked spot in Pinocchio) with its 8 themed night clubs. Plus there are many additional attractions in Orlando: Universal Studios Escape: City Walk (show dining, nightclubs, Hard Rock Cafe...) and Islands of Adventure (Cat in the hat, Spider man and many more), GatorLand (1000's of 'em), shop till you drop at Belz Outlet Mall and Mercado, Wet n Wild, Sleuths, Ripley's Believe it or Not, Sea World (children under six not allowed to swim with the dolphins), MGM - Broadway style shows, Animal Kingdom, Orlando Science Museum, Bob Carr Performing Arts, plus really mild weather during this season. Along International Drive, there is every type of fast food known to man plus some fine inexpensive restaurants as well as restaurants of the finest class, and numerous cheap souvenir shops. Dorothy Boehm will meet with the ladies at 10:30 to organize tours. Those who arrive Friday can meet in the lobby at 6 PM to go eat together. Saturday will have short demo's. Saturday night, at 6 PM, we will arrange for a low cost dinner and have a short NASQLUG meeting which all may attend. And perhaps

some entertainment (the rock version of the QL Fight Song?). On Sunday we plan to have longer workshop training sessions including one on QDT. Since we expect children at this show, we will have a special children's QL workshop focusing on games and eye catching programs.

For further information, contact Al Boehm, phone: 256 859-8051, email: albertboehm@juno.com

If you desire a demo or workshop on a particular topic or wish to give one, contact Jim Hunkins, phone: 408-685-5661, email: jhunkins@comcast.net

The show committee is also looking for a volunteer in the Florida area who could do some spot checking if needed on facilities, etc. This position should involve a minimal amount of work at the most. Please contact Al or Jim if you can help.

A web sight will also be up with information by January 1st: <http://www.jdh-stech.com/ql-usashow.htm>

An email and snail mail mailing list will also be maintained to keep potential participants fully informed of all plans and any last minute changes that may occur. Contact with Al or Jim or follow the link on the web page to be added to the list. For European snail mail users, please contact Jochen at QL Today.

Jochen adds: if you plan to visit the show from Europe, please book your flights early because at the time I write this (end of November) the flights on the 23rd are already booked (BA is fully booked, for example).